

*UDXF and N&O wish you a healthy and peaceful new year*

070 2504 920 89428 61208 14982 30498 22765 83276 01  
 908 40932 70987 32123 49817 26346 81287 65491 87368 91  
 721 75654 55656 12737 72727 72727 91918 63473 67867 76  
 722 87629 37677 32612 53498 71296 28756 18276 98710 87  
 726 76329 74698 76857 98670 27601 56701 57601 7364 1  
 591 87364 87265 96710 27630 12673 84769 28743 9812 5  
 78 63298 75698 274 Numbers 376 81273 986 5 6  
 56 87432 74328 786 367 86786 4321 332  
 57 68768 68763 342 & Oddities 342 48273 48768 330  
 93 98432 32432 867 286 43286 43286 432  
 743 85743 86743 39867 32867 86743 43286 43286 43243 86  
 741 85743 86743 86743 86743 86743 86743 86743 86743 1  
 343 86743 98754 98754 98754 98754 29867 67543 67986 8  
 76 87698 69876 87698 69876 87612 12341 34867 86798 632  
 167 86566 65656 56756 56123 32143 14321 32143 14321 321  
 12761 58765 58765 58765 58765 58765 58765 58765 58765



670	27364	92836	09428	61208	74982	36498	32764	81276	01
986	40932	70987	32123	49817	26346	81287	65491	87364	81
721	75654	55656	12737	72727	72727	91918	63473	67867	76
723	87629	37677	32612	53498	71296	28756	18276	98716	87
7269	76329	74698	76857	98670	27601	56701	57601	73648	15
591	87364	87265	96710	27630	12673	84769	28743	98127	59
58	63298	75698	27465	87326	49876	28376	81273	98615	62
667	87432	74328	78674	29867	32867	67867	86786	43286	432
667	68768	68763	34234	34238	68768	62342	48273	48768	234
936	98432	32432	86743	43286	43286	43286	43286	43286	432
743	86743	86743	39867	32867	86743	43286	43286	43243	867
741	86743	86743	86743	86743	86743	86743	86743	86743	435
543	98798	98754	98754	98754	98754	29867	67543	67986	867
976	87698	69876	87698	69876	87612	12341	34867	86798	632
867	43298	65656	56756	56123	32143	14321	32143	14321	321
81	32787	58765	76587	58765	76587	58765	76587	58765	765
75456	36543	54365	36543	54365	36543	54365	36543	54365	543

# *Numbers & Oddities*

## *a.k.a. The Spooks Newsletter*

*Edition #219, December 2015*

Editor: Ary Boender email: [udxf@udxf.nl](mailto:udxf@udxf.nl)

**Numbers & Oddities** <http://www.numbersoddities.nl>

"Numbers & Oddities" a.k.a. the "Spooks Newsletter" is a newsletter for the members of the Utility DXers Forum (UDXF), the Spooks mailing list, HF Underground and everyone else who is interested in Numbers Stations.

"Numbers & Oddities" covers the fascinating world of Numbers Stations and other odd radio signals on shortwave.

Welcome to the 219<sup>th</sup> edition of Numbers & Oddities, the last issue in 2015.

I think that we have some nice stuff for you this month. An unid station was active for a short period on 10755 kHz. Probably a training/test/special event of M14/M24. You can find the logs in the Utility Round-up section. Further a lot of M42, M42b, M42c and M42d logs and transcripts and more about the recently found Korean station V28. A new designator was assigned: UM02. It is for the unid net on 10470 kHz. E22 was active for a few days and we have a new E25 reporter.

Further the usual bunch of logs and transcripts.

Interesting websites to visit: <https://linuxcoffee.com/numbers/> about setting up a numbers station and Rainer Brannolte's updated Virtual Museum of Radio Communications <http://www.utilityradio.com/>

**Attention:**

**Note that our old URLs are defunct now.**

**N&O** <http://home.luna.nl/~ary/index.html>

**UDXF** <http://home.luna.nl/~ary/page2.html>

**The xxx.luna.nl email addresses are also no longer valid.**

Corrections (thanks Peter):

1. Monolith stations (Appendix 2): Squeaky wheel is 4th Air defence and air force army network, 72th Communication hub, Rostov-na-Donu.
2. The correct frequency for S4525 is 4524 kHz

We end this edition with the 2015 N&O index.

*I'd like to thank everyone who contributed to N&O and UDXF and hope to see even more of your logs in 2016.*

***I wish you all a healthy, peaceful and prosperous new year !!!***

## **VOICE STATIONS**



**E06**

**14575/17420 kHz, 04-12/17-12/18-12, 0600/0700 UTC**

923 487 105

18230 87950 58099 68079 96603 69561 97200 30430 00685 42135

73537 42641 30278 12381 34111 81970 57977 49783 33935 36459

63800 28539 89476 90858 58603 13342 51331 08761 88435 49954

00819 34344 37058 46495 00202 62192 68773 56400 56195 48819

78794 98967 41475 82929 43307 78442 83852 02061 86434 87580

77814 17045 06277 06611 48120 24720 27230 33556 40130 03131

70751 06832 76563 94066 61775 06071 05364 61155 12963 42108

93377 76982 53964 72061 45505 37603 97895 00450 54041 28000

62206 52280 07868 86804 86123 29752 66197 43797 11882 83598

26612 28589 21891 74725 41864 73939 49059 87561 65518 62134

02451 30577 30717 87870 75450

487 105 00000

**6792/4496 kHz, 07-12, 1800/1830 UTC**

910 873 61

23123 22400 89905 22979 90925 92691 82403 14020 05566 46560  
72588 56547 13235 45129 91826 11183 10961 18132 86816 76528  
92322 11275 50122 10602 98350 59470 80107 99231 03286 34387  
12443 82374 89891 39762 90392 74271 94004 52894 66051 38397  
23008 35771 49726 03125 77919 64264 49655 29053 33785 48825  
69243 63334 58050 45123 53998 46135 71620 78062 05375 42566  
82271

873 61 00000

**6792/4496 kHz, 14-12, 1800/1830 UTC**

910 452 66

89741 60598 36201 79912 47499 58235 39235 22361 61259 60307  
44368 63970 59470 54440 91652 89644 64875 20437 85548 23913  
86228 07617 75366 01872 16755 45845 04158 82407 44028 13692  
43257 89647 00969 12151 54652 93569 12634 17377 48378 65708  
18509 10847 27113 70896 74982 10414 35173 80981 67570 50669  
54086 21448 87987 86062 11935 86890 55065 15212 98663 86271  
84882 49843 04516 03905 39404 76797

452 66 00000



*E07*

**7478/6778/5278 kHz, 14-12, 2000/2020/2040 UTC**

472 1 136 48

02638 44184 09070 28224 68121 74097 96092 45462 50908 78253  
69540 06420 01233 87982 37571 61371 55293 18839 88018 86670  
26960 84694 50567 93769 70972 92689 12001 12067 74224 38254  
98480 85943 53077 13109 86864 96117 12166 33239 87093 56687  
98371 37213 66347 46663 90096 01543 28149 54764

000 000

**8123/9323/10423 kHz, 19-12/26-12/30-12, 0700/0720/0740 UTC**

134 1 133 42

29216 50219 68239 38144 88342 13038 72768 75490 58901 87831  
59630 39932 14128 98966 89005 32580 07427 62024 81470 44154  
84081 56984 77158 89063 48426 27589 30879 43337 55913 21752  
26166 81711 10562 53251 16217 75058 94326 97465 93015 55578  
26510 73992

000 000

**7464/5864/4564 kHz, 23-12, 1800/1820/1840 UTC**

485 1 683 37

86932 79859 28842 60136 97925 25254 10589 88595 12237 85281  
13062 99165 28037 92222 43730 24760 51007 93320 12419 96202  
54479 48046 54077 25063 12717 71090 69514 62470 29999 70267  
06152 96353 87129 54764 86088 13470 97541

000 000

**7478/6778/5278 kHz, 30-12, 2000/2020/2040 UTC**

472 505 75

04837 92480 96799 16125 80158 04126 29868 29663 39297 16390  
06868 27328 82615 43844 72771 90571 19759 80175 35674 58005  
92705 25448 07338 13211 81816 79753 00064 28437 36304 92964  
37623 83205 04789 66393 11174 60536 97210 83790 27927 02747  
62910 53624 05486 35426 52698 78386 62458 38130 24477 62625  
03958 61049 06330 99076 47391 16967 09742 04610 14053 86038  
24545 97849 31248 14036 42706 68024 74539 40101 88402 96984  
03454 83666 06869 80306 87245  
000 000

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*E07a*

**5877/5277/4577 kHz, 02-12, 2100/2120/2140 UTC**

825 1 17673 7104 79

79147 59964 58987 53690 66696 05914 18988 02130 60145 43701  
21169 21772 56157 94707 52649 78677 20313 68694 03074 12107  
90527 41891 64739 54089 01390 15888 84576 83008 94136 53568  
09288 85616 92142 36205 42387 68832 79900 12633 82157 99708  
13212 37435 17957 86050 52475 01786 63250 54642 41392 54775  
43674 42795 53992 03074 95028 54103 39311 14537 07400 76697  
83539 68259 53865 12999 79020 64277 26068 83465 45879 38421  
13174 22309 74631 33848 90685 18941 65307 14549 38555  
000 000

**5111/5811/6911 kHz, 03-12, 0530/0550/0610 UTC**

189 1 17673 7104 79

79147 59964 58987 53690 66696 05914 18988 02130 60145 43701  
21169 21772 56157 94707 52649 78677 20313 68694 03074 12107  
90527 41891 64739 54089 01390 15888 84576 83008 94136 53568  
09288 85616 92142 36205 42387 68832 79900 12633 82157 99708  
13212 37435 17957 86050 52475 01786 63250 54642 41392 54775  
43674 42795 53992 03074 95028 54103 39311 14537 07400 76697  
83539 68259 53865 12999 79020 64277 26068 83465 45879 38421  
13174 22309 74631 33848 90685 18941 65307 14549 38555  
000 000

**5887/5387/5087 kHz, 11-12, 1610/1630/1650 UTC**

830 1 17077 8484 83

46613 47949 59339 45768 01505 74000 24017 01635 11732 27244  
95532 99301 88752 44902 79005 79560 62218 74908 77530 77965  
56738 75564 39421 66624 12591 20591 69684 62485 18501 43780  
21834 64430 17216 86486 29968 44343 14435 74601 34035 94607  
17947 80848 58921 80041 71722 19027 59321 31058 38566 24346  
50498 36492 40082 98873 07805 10448 86445 34039 76799 86939  
86318 87241 31695 87372 65308 83011 07322 98365 70328 45273  
43224 59529 20043 52266 70156 11461 35813 58564 38455 22477  
71797 76717 25229  
000 000

**11121/12221/1342 kHz, 12-12, 0900/0920/0940 UTC**

124 1 17077 8484 83

46613 47949 59339 45768 01505 74000 24017 01635 11732 27244  
95532 99301 88752 44902 79005 79560 62218 74908 77530 77965  
56738 75564 39421 66624 12591 20591 69684 62485 18501 43780  
21834 64430 17216 86486 29968 44343 14435 74601 34035 94607  
17947 80848 58921 80041 71722 19027 59321 31058 38566 24346  
50498 36492 40082 98873 07805 10448 86445 34039 76799 86939  
86318 87241 31695 87372 65308 83011 07322 98365 70328 45273  
43224 59529 20043 52266 70156 11461 35813 58564 38455 22477  
71797 76717 25229  
000 000

**5877/5277/4577 kHz, 16-12, 2100/2120/2140 UTC**

825 1 11602 7516 71

98360 44321 13357 62360 40994 97666 33293 56631 90386 02090  
56541 66317 02232 89219 05211 42148 85050 58363 89049 47279  
21198 29798 00026 44611 33725 66957 49167 42950 21025 88845  
38189 82153 01492 93310 41248 27626 55989 60691 02885 02582  
40073 12080 41148 30166 83425 54079 45044 11745 99963 87520  
57585 53124 62780 39189 55555 46458 06156 60216 35844 42867  
95580 30093 97233 47133 79419 94757 18841 44974 43180 58168  
51548  
000 000

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*E11a*

**10800 kHz, 01-12/04-12, 0710 UTC**

631/39 Attention

28815 54112 90238 70968 04923 31777 14181 19596 64597 20277  
18317 94773 97097 01798 73458 03914 49447 35128 60181 54154  
22361 87274 85313 44760 52472 92370 61991 72046 73871 46613  
68929 22296 44254 49651 89717 07698 69237 19419 38510  
Attention, rpt msg, out

**14666 kHz, 01-12/05-12, 1345 UTC**

912/34 Attention

17006 96384 68907 22526 79060 58388 44718 76724 29829 12126  
85122 55853 07290 18869 70549 88420 24065 41349 74450 21588  
49479 14682 43608 44458 83349 32097 11843 52837 66013 07795  
79832 99359 06159 37264  
Attention, rpt msg, out

**10125 kHz, 03-12/07-12, 0820 UTC**

436/38 Attention

86939 95930 27437 15097 43810 69503 28021 90982 79942 20405  
75985 25015 17090 02413 20768 74761 26128 71126 42433 25448  
15137 62954 79855 75617 36552 43636 67492 82182 37579 49456  
60702 86274 75696 59261 52246 49997 22538 82964  
Attention, rpt msg, out

**13046 kHz, 07-12, 0600 UTC**

185/31 Attention

09672 05126 29890 68021 18916 43169 92648 12550 57930 92861  
39685 30107 98606 88277 91705 90182 07660 31929 56894 94846  
65969 01200 18225 08957 61894 45344 56233 19198 08444 91053  
27136

Attention, rpt msg, out

**9446 kHz, 07-12, 0830 UTC**

643/39 Attention

86558 37165 08374 12085 84540 06442 33928 98554 21237 49480  
39491 16831 22873 47443 81816 75216 76854 85013 04576 99071  
85946 46691 24082 41982 78368 91193 05414 10047 67034 72644  
55795 52189 34252 48424 84792 54094 89059 09549 09100

Attention, rpt msg, out

**12153 kHz, 08-12, 1045 UTC**

574/36 Attention

92135 14197 58310 16042 40120 51474 87426 89609 20504 40882  
18729 32247 93167 04959 57711 50855 94992 82989 78479 07557  
42291 98738 62680 67859 59999 28213 77200 34518 26339 84954  
31509 27767 87367 56124 14137 45508

Attention, rpt msg, out

**10429 kHz, 09-12/13-12, 0805 UTC**

315/34 Attention

50346 33156 72195 44386 16965 86463 15478 19894 18392 74008  
33330 46845 00127 41413 58145 38259 58891 06566 15299 44783  
25159 12967 43663 66152 16374 58728 43047 60061 75439 82806  
18127 28710 92926 27019

Attention, rpt msg, out

**11100 kHz, 09-12, 1205 UTC**

465/36 Attention

42985 52090 07945 38017 45802 93127 61109 73165 78570 96714  
36437 16255 90678 83592 63969 44357 77855 67682 58150 00365  
75632 59296 96815 74340 12188 30290 10172 41782 86120 70194  
89349 18388 54244 68697 75721 99199

Attention, rpt msg, out

**9446 kHz, 11-12, 0830 UTC**

643/39 Attention

46558 37165 08374 12085 84540 06442 33928 98554 21237 49480  
39491 16831 22873 47443 81816 75216 76854 85013 04576 99071  
85946 46691 24082 41982 78368 91193 05414 10047 67034 72644  
55795 52189 34252 48424 84792 54094 89059 09549 09100

Attention, rpt msg, out

**10213 kHz, 14-12, 0745 UTC**

261/38 Attention

63200 11033 29591 36662 14010 52486 80446 34260 48968 95095  
75335 11513 45654 94191 66451 74962 29985 88183 02576 84948  
58740 00101 53026 15854 69926 92113 20414 96551 67083 76942  
61973 63677 37403 59590 57044 24594 67334 52779

Attention, rpt msg, out

**7840 kHz, 17-12, 0645 UTC**

514/34 Attention

08235 04070 40840 14911 85010 60923 68355 57761 91767 20660  
15851 34332 14913 27597 33694 25169 49917 65897 16572 20129  
75847 92558 31286 88476 38436 70486 95131 05988 72009 58507  
80899 26707 79645 52209

Attention, rpt msg, out

**6940 kHz, 17-12, 0820 UTC**

438/36 Attention

43830 88156 14268 09353 52879 43375 23044 69014 63323 88953  
28820 36506 55505 85649 42791 26618 84900 64955 44751 31405  
78688 35801 21770 67493 59190 35739 35741 00667 46874 23147  
73974 54353 32499 83028 02932 32272

Attention, rpt msg, out

**9443 kHz, 19-12, 1705 UTC**

390/38 Attention

47020 20089 38466 54112 54994 27343 98456 65717 48331 30455  
55826 76436 26042 89010 31654 93273 43130 78303 01000 89382  
07913 77334 13762 36684 64408 99385 89793 39066 30839 30833  
50038 75060 71000 67854 31083 82685 81868 40101

Attention, rpt msg, out

**10448 kHz, 23-12, 1625 UTC**

972/32 Attention

71990 02064 47993 41168 63180 29906 10725 25360 93723 19568  
40110 51696 19601 48846 47542 82706 08179 12380 50426 63780  
98464 91918 93368 61540 14537 49562 48069 16174 58199 70116  
44106 24253

Attention, rpt msg, out

**16112 kHz, 24-12, 0745 UTC**

331/32 Attention

47958 56104 25062 12147 96877 75970 02203 10459 26509 36927  
23017 50886 36599 20006 21796 08507 28222 42953 13450 51321  
01616 50334 43939 50078 74581 31543 10674 45417 56826 54650  
94051 83494

Attention, rpt msg, out

**16112 kHz, 27-12, 0730 UTC**

353/38 Attention

01918 54866 40845 78903 23530 86712 07121 83930 19523 74088  
05548 40510 20040 31999 20658 93086 07309 75060 92699 80704  
82832 95145 03612 99492 10087 39903 55906 92638 11225 04098  
14719 12447 63691 29614 48068 39977 83333 72675

Attention, rpt msg, out

**9446 kHz, 30-12, 0900 UTC**

534/31 Attention

24991 30932 27484 19208 16978 68187 57358 84448 52315 58052  
62173 06883 25847 62688 11450 71891 36806 26741 38818 53323  
51992 88826 44044 80310 70570 66191 92490 42133 54792 29294  
01374

Attention, rpt msg, out



**9950 kHz, 31-12, 0930 UTC**

275/32 Attention

81892 71495 39630 67455 36305 32453 38614 95868 62946 85620

43277 02920 57165 63990 64752 53855 37083 54868 39518 94972

34199 18725 96952 01781 08004 48936 76841 65221 81076 97444

91593 87312

Attention, rpt msg, out

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E17z

**11170/9820 kHz, 03-12, 0800/0810 UTC**

674 802 5 39394 35082 42571 33785 37331 802 5 00000

**11170/9820 kHz, 10-12, 0800/0810 UTC**

674 802 5 39394 35083 42571 33785 37331 802 5 00000

**11170/9820 kHz, 17-12, 0800/0810 UTC**

674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000

**11170/9820 kHz, 24-12, 0800/0810 UTC**

674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000

Note: the 0810 transmission started 1 minute late at 0811 UTC. Signal off at 0813 UTC, restarts a few seconds later.

**11170/9820 kHz, 31-12, 0800/0810 UTC**

674 674 674 00000

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E22

17387 kHz, 23-12, 1000 UTC

17387 kHz, 23-12, 1100 UTC

17387 kHz, 23-12, 1305 UTC

7140 kHz, 24-12, 2205 UTC

TK8. "This is Tango Kilo 8" repeated for 5 minutes

EV2. "This is Echo Victor 2" repeated

DC6. "This is Delta Charlie 6" repeated //15020 kHz

HB5. "This is Hotel Bravo 5"

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E25 / E25a

Many thanks to qsr177 for the E25 logs

6140 kHz, 02-12, 0820 UTC Distorted Arabic music. Two different pieces. Ends abruptly 5 minutes later with the transmitter switching off.

6140 kHz, 02-12, 0840 UTC 169 Message(x3) 0144 8230 1715 7708 9599 3653 2006 Rebeat(x3) [Msg repeat] EOM EOT. Many windows XP sounds before the transmission, popup sound, error sounds and click sound. No song intro

6140 kHz, 05-12, 1035 UTC	Carrier on and off since 0900z. Live male voice. Test counts at 1035z slightly off freq. 3 counts, then off.
9450 kHz, 06-12, 1212 UTC	Intro song: Umm Kulthum - Enta Omri. Callup: 837 6. Ended 1218 UTC: Message (x3), Rebeat (x2) Eat, EOM, EOT.
9400 kHz, 08-12, 1115 UTC	Probably a test. Music only: Umm Kulthum-Arouh Limin.
9450 kHz, 08-12, 1206 UTC	Intro music. Female voice: 830 6 (repeated) Message, Message, Message followed by a Windows XP sound
6140 kHz, 09-12, 0848 UTC	169 Message(x3) 1145 5490 4518 0838 0657 3601 6456 Beat Beat Rebeat [Msg repeat] EOM. Windows xp shutdown sound at the end. No song intro used.
6140 kHz, 10-12, 0840 UTC	Repeat of 9 Dec. No song intro used.
6140 kHz, 13-12, 0808 UTC	Tests, same male voice. 3 counts, then off.
9600 kHz, 23-12, 0905 UTC	Test tone for 2 minutes, Arabic music, test tone, then off.
9555 kHz, 23-12, 1221 UTC	Test

#### Schedules:

E25a seems to transmit completely random in the 0700/1000 time slot on 6140 kHz.

E25 schedule for ID 169: every Wednesday and Thursday at 0840 UTC on 6140 kHz. No musical intro.

(Source: qsr711)



G06

#### 3728/4484 kHz, 07-12, 1658/1757 UTC. Early starts

**4484 kHz, 07-12, 1754 UTC. Test: 111 22222 6 111 22222**

248 (R) 111 88

91299 96449 14155 31592 44788 28351 33228 34985 19470 39917-  
 23866 74435 82448 89934 23254 28127 82262 35950 63558 67337-  
 98494 64291 28425 61634 38223 92178 31817 47238 22177 52294-  
 41535 72448 36874 38227 22898 82437 17598 67939 29465 89248-  
 72983 96857 71786 49477 27971 42273 96229 22718 86241 16533-  
 52369 96544 98876 68957 49721 78276 68922 73234 28438 13144-  
 24622 13128 83429 76285 64321 46417 49721 56577 59848 33327  
 15941 45993 43635 12297 23734 24465 79267 46545 12532 84149  
 87365 99256 41971 25966 99383 35643 66827 62228  
 111 88 00000

Errors in group 10, 20, 30, 40, 50 and 60. These groups were not repeated.

#### 4519 kHz, 10-12/24-12, 1830 UTC

271 20

14259 22676 32782 32782 76723 89409 12215 74326 64270 90235  
 38085 59543 12319 74238 36664 12256 18841 73311 98089 12250  
 271 271 20 20 00000

#### 4792 kHz, 11-12, 1930 UTC

436 271 271 20 20

14259 22676 32782 32782 76723 89409 12215 74326 64270 90235  
 38085 59543 12319 74238 36664 12256 18841 73311 98089 12250  
 271 271 20 20 00000



S06

**17435/14375 kHz, 03-12/04-12, 0830/0930 UTC**

842 709 35

67657 62023 67693 84904 38521 85733 49121 85999 11739 80279  
12861 03413 10637 25252 46696 00158 45773 25865 13776 52403  
75114 32575 44479 77542 88138 80329 26419 52983 43540 95891  
34792 36602 15254 46659 70227  
709 35 00000

**17435/14375 kHz, 17-12/18-12, 0830/0930 UTC**

842 956 37

91039 98640 34293 85383 52943 16166 08736 25563 63108 60484  
33644 45877 39552 97055 88146 76128 77069 03723 55865 81474  
11670 86695 73591 49552 74977 46245 28494 20284 61988 09289  
89802 88044 60661 71060 85906 30875 16752  
956 37 00000

**17435/14375 kHz, 24-12, 0830/0930 UTC**

842 719 38

35887 27601 04679 74994 38235 72955 65038 72363 41126 58562  
03412 88882 11730 75319 24557 74680 07390 18523 22806 65650  
03748 22214 22538 29568 44052 99480 48440 61127 33094 05900  
11483 55592 24217 68319 21565 15746 72825 46154  
719 38 00000

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S11a

**9200 kHz, 19-12, 1625 UTC**

839/40 Vnimanie

36361 20346 84408 81345 09473 41072 57833 29526 13891 67134  
10402 37904 62668 21581 70500 18194 80762 81253 86036 99280  
66429 26235 39430 57820 00142 10838 05277 38608 26790 49724  
06047 74153 90121 15887 96587 44317 31473 62096 12484 30940  
Vnimanie, rpt msg, konec

**7504 kHz, 22-12, 0915 UTC**

480/36 Vnimanie

85427 15016 46956 04670 41804 97734 28528 48633 90569 82312  
10265 87018 62273 39134 44904 20447 75883 84443 56907 05159  
85609 79963 18471 88916 96691 05710 61831 46745 23087 97368  
82126 35806 36617 78563 87621 82538  
Vnimanie, rpt msg, konec

## 12530 kHz, 31-12, 1015 UTC

472/31 Vnimanie

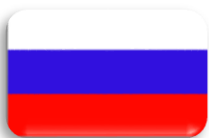
96126 53477 07664 62987 90018 09267 99182 85561 71384 47662

39113 71844 79117 50498 70137 91829 52711 63211 03721 29530

98725 41389 45354 63344 16141 24697 21346 43075 46789 68124

41855

Vnimanie, rpt msg, konec



## S28 - The Buzzer

Mode: USB

Frequency: 3216 & 4625 kHz

Date	UTC	
1-12	0809	MDZhB 08446 LYeGOChNICA 30165422
3-12	0956	MDZhB 72484 MYeGALOZAVI? ??293715
3-12	1436	MDZhB 21229 RYeVMANOL 61417984 Female voice on background
6-12	1251	MDZhB 63378 NYeVKUSNYJ 28153828
7-12	1022	MDZhB 61468 LYeVICHAR 58288996
7-12	1107	MDZhB 46316 NYeVZRACHNYJ 45741867
13-12	1405	MDZhB 18014 ZYeAZIN 01846202
13-12	1432	MDZhB 47700 ADOPTACIN 07539030
13-12	1543	MDZhB 42484 UDOBNYJ 64618101
22-12	1322	Phone channel is mistakenly set on top of buzzer channel
22-12	1517	Phone channel is mistakenly set on top of buzzer channel
28-12	1628	ZhUOZ 92002 AGATU 56884832
28-12	1754	ZhUOZ 73255 TVIN 90510025



## S30 - The Pip

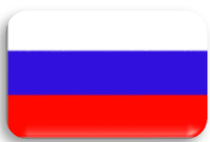
Modes: CW (Pip), USB (messages)

Frequencies: 3756 kHz (night), 5448 kHz (day)

Freq	Date	UTC	
3756	1-12	1552	Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI
3756	2-12	1452	8S1Shch 88133 ANANAIT 96932997 KOFYeKTOMIN 44533110
3756	2-12	1601	8S1Shch Channel test: 03211334
3756	2-12	1704	BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR
3756	3-12	0458	M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5
3756	3-12	1424	8S1Shch 78485 PROVIZOR 61483932
3756	3-12	1705	V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch'
3756	3-12	1828	N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM
3756	4-12	1730	Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZU
3756	5-12	1450	8S1Shch 79139 PAGLINOK 91410038
3756	5-12	1614	TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27 V2MZ
3756	5-12	1847	SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY
5448	6-12	0550	JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4
5448	6-12	1248	8S1Shch 04811 ISTOVAL 94375299
3756	6-12	1946	HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP
3756	7-12	0510	TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT
3756	7-12	1907	42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh



Freq	Date	UTC	
3756	8-12	0446	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ
3756	8-12	0446	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ
3756	8-12	1842	Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch
3756	8-12	1842	Z7PM 7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch
3756	9-12	0509	DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N 37CN MUDR
3756	9-12	0509	DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N 37CN MUDR
3756	9-12	0600	8S1Shch 64814 RASTAVA 48829047
3756	9-12	1408	7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA
3756	9-12	1408	7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA
3756	9-12	1821	ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ
3756	9-12	1821	ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ
5448	9-12	1826	8S1Shch 64814 RASTAVA 48829047
3756	10-12	0429	KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27
3756	10-12	0459	KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27
3756	10-12	0459	DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V
3756	10-12	1826	DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V
5448	11-12	0538	ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC
5448	11-12	0538	ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC
3756	12-12	1508	6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ
3756	13-12	1404	8S1Shch 22326 KURIYa 42978530
3756	13-12	1426	8S1Shch 39778 RASSADKA 49921102
3756	13-12	1544	8S1Shch 71684 NAZOJNIK 58727295
3756	13-12	1609	8S1Shch 19665 KYuRIT 79526228
5448	17-12	0533	6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ
3756	17-12	1827	TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N
3756	18-12	0457	37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C
3756	24-12	0422	27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS
3756	27-12	0506	ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3
3756	27-12	1821	ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF
3756	28-12	1624	8S1Shch 34671 KONDeNSACIYa 56537181
3756	28-12	1756	8S1Shch 23121 KONYuShNYa 14670667
3756	28-12	1812	ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO
3756	29-12	0510	TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N
3756	29-12	1424	8S1Shch 44636 MIMOShKYeT 80211092
3756	29-12	1430	8S1Shch 80671 MOHOHOD 64020034
3756	30-12	0456	PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z'
3756	30-12	1820	53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Pip is off freq



## S32 - Squeaky Wheel

Mode: USB

Frequencies: 3838 kHz (night), 5473//7009 kHz (day)

Freq	Date	UTC	
7009	1-12	0807	AL'FA-45 Failed signal sending attempt
7009	1-12	1326	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	1-12	1429	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39 FONTAN-34
3828	1-12	1623	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 KURGAN-40 DUBLYoR-68 STUPA-32
3828	1-12	1922	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
7009	2-12	1215	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	2-12	1449	AL'FA-45 34950 GITANA 50309751

Freq	Date	UTC	
3828	2-12	1850	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
7009	3-12	0950	AL'FA-45 74530 VAZhDA 25133885
3828	3-12	1004	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	3-12	1429	AL'FA-45 58377 AGAMNYJ 60359496
3828	3-12	1437	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	3-12	1824	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32 ROSA-64 DZhiGIT-46
3828	4-12	1619	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	4-12	1836	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828	5-12	1325	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828	5-12	1445	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	5-12	1454	AL'FA-45 85657 NAPLYV 98280262
3828	5-12	1939	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828	6-12	1538	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828	6-12	1917	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828	7-12	1533	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828	8-12	1538	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	8-12	1538	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	8-12	1832	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828	8-12	1832	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 K
3828	9-12	0606	AL'FA-45 93952 GASTRANA 04783790
3828	9-12	0606	AL'FA-45 93952 GASTRANA 04783790
3828	9-12	1105	AL'FA-45 61281 SOBRATSTVO 49700621
7009	9-12	1105	AL'FA-45 61281 SOBRATSTVO 49700621
3828	9-12	1413	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 STUPA-32
3828	9-12	1413	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 STUPA-32
3828	10-12	1656	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	10-12	1656	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	10-12	1730	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828	10-12	1730	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828	13-12	1404	AL'FA-45 28797 VYeRNIN 86685481
3828	13-12	1409	AL'FA-45 18179 TOKMACH 23522556
3828	13-12	1430	AL'FA-45 09856 BRICAPUN 75785788
3828	13-12	1548	AL'FA-45 54992 NALIVChATYJ 07876547
3828	14-12	1612	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	15-12	1424	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	15-12	1708	ROSA-64 DZhiGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828	17-12	1538	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828	17-12	1655	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	17-12	1924	KOVBOJ-39
3828	24-12	1600	AL'FA-45 35341 PUSTOTA 69254008
3828	24-12	1612	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	24-12	1726	AL'FA-45 48608 UGRYuMYJ 88415148
3828	24-12	1742	AL'FA-45 01600 KARTA 54347381
3828	24-12	1757	AL'FA-45 27199 FORTUNA 00377897
3828	24-12	1826	AL'FA-45 63029 MONITOR 45520826
3828	24-12	1912	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	24-12	1957	AL'FA-45 48115 UNNA 30656642

Freq	Date	UTC	
3828	25-12	1500	AL'FA-45 32856 ZAMYKANIYe 73646064
3828	25-12	1839	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828	28-12	1628	AL'FA-45 06292 NOZhOBER 94614767
3828	28-12	1644	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828	28-12	1800	AL'FA-45 42173 LYePOSKIT 74408758
3828	28-12	1825	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39
3828	29-12	1431	AL'FA-45 26929 DZhUTOKRYaZh 52029705
3828	29-12	1439	AL'FA-45 54698 BYeSTYeNYeVOJ 23679189
3828	29-12	1606	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 SLIVA-94 LANDYSh-74 STAZhER-29 A
3828	30-12	1414	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828	30-12	1603	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27



## S3850

Frequencies: 3850 kHz (night), 4940 kHz (day)  
Mode: USB

Freq	Date	UTC	
3850	1-12	0423	BARON-78 Network test and count
3850	2-12	0403	BARON-78 TROS-28
3850	2-12	0406	BARON-78 VYeKTOR-70
3850	4-12	0417	BARON-78 TROS-28
3850	5-12	1501	BARON-78 78331 KAGLYuSAL 85341796 Sent for Tros-28
3850	6-12	0455	BARON-78 TROS-28
3850	8-12	1446	BARON-78 Test counts
3850	9-12	1415	BARON-78 KOVBOJ-35 SEKRET-80 KADMIJ-72
3850	9-12	1415	BARON-78 KOVBOJ-35 SEKRET-80 KADMIJ-72
4940	9-12	1504	VYeKTOR-42 ALEUT-11 TULA-86 POLYuS-55 KURTKA-27 KRUG-31
3850	9-12	1801	BARON-78 Time signal for TROS-28
3850	9-12	1801	BARON-78 Time signal for Tros-28
4940	9-12	1900	VYeKTOR-42 ALEUT-11 TULA-86 POLYuS-55 KURTKA-27 KRUG-31
3850	10-12	0402	BARON-78 Time signal and network test.
3850	10-12	0402	BARON-78 Time signal and network test
4940	10-12	0622	VYeKTOR-42 ALEUT-11 TULA-86 KRUG-31 POLYuS-55 KURTKA-27
4940	10-12	0622	VYeKTOR-42 ALEUT-11 TULA-86 KRUG-31 POLYuS-55 KURTKA-27
3850	13-12	1436	BARON-78 15198 VINOPROVOD 81711585 Sent for Tros-28 in urgency cathegory "Vozduh". Confirmation requ
3850	13-12	1554	BARON-78 20711 PALAMIDA 20920515 Sent for Tros-28 in urgency cathegory "Vozduh". Confirmation reques
3850	16-12	0357	BARON-78 TROS-28 Network test and count
4940	17-12	0607	VYeKTOR-42 POLYuS-55
3850	17-12	0642	BRITVA-36 VATAGA-12 Network test and count
3850	17-12	1412	BARON-78 TROS-28



## S5292

Frequencies: 5252 kHz USB

Freq	Date	UTC	
5292	1-12	0737	TRYeL'-31 18409 UDVOITYeL' 53278652
5292	7-12	0807	RYeGATA-75 37941 IZBORSK 36441192 count before the signal
5292	7-12	1237	SYeKRYeT-39 34676 TABLYeTKA 37298563
5292	9-12	1214	BOYeC-43 37653 PLAVUChIJ 18469647
5292	9-12	1214	BOYeC-43 37653 PLAVUChIJ 18469647
5292	15-12	0738	TRYeL'-31 48564 INTYeNDANT 45650101 count before the signal
5292	15-12	1343	VIZIR-21 27474 KUVALDA 53570866
5292	15-12	1343	VIZIR-21 27474 KUVALDA 53570866
5292	30-12	0755	TRYeL'-31 VIZIR-21 26649 OKRUZhNOJ 12856479
5292	30-12	1407	TRYeL'-31 VIZIR-21 37465 SLOVAR' 42295886 count before the signal



## *V02a*

### *Dirección General de Inteligencia*

Every now and then V02a pops up instead of M08a. A mistake or not? Don Schimmel went back through his 2015 logs and noted the following:

V02a in place of M08a on 7554 kHz at 2000 UTC:	20-08, 3rd Thursday
19-02, 3rd Thursday	24-09, 4th Thursday
10 -04, 2nd Friday. The only one that is not on a Thursday	08-10, 2nd Thursday
!!!	29-10, 5th Thursday
28-05, 4th Thursday	17-12, 3rd Thursday
11-06, 2nd Thursday	

Don says "From these limited observations it would appear that some Thursdays 2000 UTC on 7554 kHz are deliberate V02a schedules."

V02a was heard by several contributors. It was sent in place of M08a on 7554 kHz, 17-12, 1956 UTC in LSB. The transcript was submitted by QSR177. Thanks for that.

Headers: 26102 30421 43752

Message for 26102:

20565 78822 28057 12273 03663 15034 68434 24325 34738 05772  
 65766 7151? 28260 20153 55022 78018 58801 05524 40683 57384  
 35871 60401 68144 44362 31158 63147 70867 05332 08421 32042  
 47403 04007 25384 80645 67142 46421 33187 46346 52444 42366  
 88516 80183 56??? ????? ????? ????? ????? ????? ?????  
 14641 66376 42475 46228 38281 82122 42473 10521 21063 12438  
 52405 27225 21766 23143 53188 45275 31218 83414 68566 25112  
 00807 60361 88601 04166 46424 21118 31040 25103 07633 75780  
 03488 47011 38576 84073 05661 15324 65075 70866 25422 08325  
 70546 80025 45323 47462 48633 06155 58214 08163 71650 30573  
 83854 56135 17636 84788 20371 47637 41531 44354 51202 87205  
 30534 03348 63706 63777 46680 68722 83248 24235 80557 77748  
 68747 18161 03440 27007 48470 26180 48013 32332 73863 54586  
 58825 77446 52762 24703 63548 38357 74056 74020 50510 54628



33074 61150 64037 08111 82334 24565 18161 24461 77414 82768

Message for 30421:

50644 56188 57211 43683 71356 23428 17440 87848 02458 08151  
05016 40162 83054 06060 01057 33784 74828 05165 01336 13705  
33345 60472 26753 54064 75307 36257 51250 60783 60817 25812  
45216 21713 51068 33136 47100 33282 03641 22515 53487 78026  
74775 57642 32765 50778 07386 70134 80375 74748 40768 30046  
24447 00047 83315 75564 85114 04143 24681 13551 70727 74858  
????? ????? 28504 68576 61572 11052 14103 43704 87031 54728  
64377 85878 21764 17442 66375 16240 70308 65140 66242 72783  
02504 14154 68150 64656 55135 56156 02787 08077 63686 21821  
28552 54332 44240 76226 04801 38628 58814 63410 02120 81110  
27051 20374 73524 03246 32536 15171 52753 57170 08484 86441  
04011 47424 51581 30263 70716 08131 21188 31388 23013 02847  
11830 40523 42062 27013 03820 36747 65471 02624 70235 02506  
22557 72748 31370 30666 73325 26784 01688 80735 50483 86483  
23343 30036 22288 71608 65685 73467 71304 64503 47756 76345

Message for 43752:

16071 82721 06040 14880 51242 36038 26388 08081 55777 34378  
05854 55757 49777 ????? 42718 18258 16687 83580 58365 21307  
60547 70035 03735 33660 14328 20682 34278 85048 35368 14260  
36084 51834 37773 08865 15018 34434 73008 46080 88146 73602  
54705 50286 03443 83608 00062 27031 43205 40787 77100 67502  
????? ????? 57436 88455 23487 04166 66237 41067 13331 85771  
27131 11082 36831 41688 61640 53777 17334 22221 62808 18328  
32671 87408 74057 30781 76683 60761 54680 44686 70078 13784  
56235 56336 05108 84086 50310 80627 24172 44060 25138 51577  
03313 85501 68702 26117 11366 28206 23776 78057 30016 56340  
78565 22422 63055 02661 37845 12246 77305 01174 85332 05528  
57544 46330 73857 24543 16050 52776 53648 43662 20532 11440  
22776 66872 42312 85434 75642 43150 81464 80301 03714 37287  
27505 22378 08672 60110 17885 61231 45153 43265 43547 72576  
22171 52841 36118 05674 34313 82221 52388 52765 44441 01547

Final Final Final

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V07

**16037/14637/12137 kHz, 06-12, 0100/0120/0140 UTC**

661 661 661 1 492 73 492 73  
54305 18875 48984 93012 10530 33501 82738 74914 43104 81150  
48323 80034 28328 97394 10107 49303 43808 72323 53313 85970  
88534 90303 91911 59803 91733 47554 82108 32239 33319 80409  
08491 83135 52734 97493 45484 55745 75323 20591 29288 01899  
19987 33341 58894 03823 23047 93313 91372 41802 31330 30717  
93454 74541 39893 41837 80373 41028 71483 77870 39339 59012  
24933 74321 22185 32518 82492 78392 99502 33113 20733 47232  
11821 94131 71220  
000 000

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## V26

Freq	Date	UTC	Details	Mode
8073	2-12	0001	Voice callup. Male operator	USB
8073	3-12	1129	XSV85 voice callup. Male operator	USB
8073	6-12	0001	callup: DingHai de 259 We have (a message) for you. Please copy. Then: DingHai de 259, the message is coming up, copy (into 4+4 traffic)	USB
8073	7-12	0032	Male operator. Voice message, repeat of the messages sent by M95 and Q26	USB
8073	8-12	1130	Voice callup. Male operator	USB
7155	9-12	0946	i.p. female operator //9153 kHz	LSB
8073	9-12	0001	Callup. Male operator	USB
8073	9-12	1130	Callup. Female operator.	USB
9153	9-12	0946	i.p. female operator //7555 kHz	LSB
7553	10-12	1015	Female operator	USB
8073	10-12	0022	Male operator	USB
8073	10-12	1130	Callup. Male operator	USB
8073	12-12	0001	Callup. Male operator	USB
8073	12-12	1128	Callup. Male operator	USB
8073	15-12	1129	Callup. Male operator	USB
8073	16-12	0001	Callup. Male operator	USB
8073	16-12	0039	Female operator sending the same message as M95	USB
8073	28-12	0002	Callup. Male operator	USB
8073	28-12	0038	Male operator, repeating the Q26 and M95 messages	USB
8073	31-12	0021	Repeat of M95's message. Male Operator	USB



## V28

앵무새 'AengMuSae  
(Parrot)

### Notes by BCL and Token:

- Rakdusan is frequently heard on 3277kHz. According to a person from North Korea, Rakdusan really exists in Cheongjin city, North Korea. North Koreans call the Haebang mountain the Rakdu because the top of the mountain resembles a camel's head. The mountain has tombs in which the dead soldiers were buried in the Korean War (1950-1953).
- According to BCL most Korean dxers think that this not a numbers station but that it is operated by the North Korean army.
- Transmissions often end with the Korean word 앵무새 'AengMuSae (Parrot) hence the nickname of the station.
- Frequencies may vary. 3039-3049, 3052-3055, 3065, 3156, 3261, 3277, 2689-3694 kHz. 3277 kHz is the main frequency.
- Token recorded the station: <https://www.youtube.com/watch?v=Cg9-J8uYMEw>

### Tokens reports:

#### 9 December

There appear to be some changes in the V28 patterns over the past few days. It is possible these activities have been occurring in the past and are just now being noticed.

For example, this morning, Dec 9, 2105, both 3277 kHz and 3689 kHz were used. The "normal" V28 came up at 1330 UTC on 3277 kHz, it continued until about 1340 UTC. At the same time, 1330 UTC, 3689 kHz became active with some type of voice traffic, but not the normal V28 format. 3689 kHz ended quite early but the carrier stayed on air, possibly this was just test audio at 1330 UTC. And then, at 1340 UTC and after 3277 kHz was complete, the voice form 3277 kHz shifted to the transmission on 3689 kHz, and sent a brief message. Nothing was seen on 3052 during this mornings events.

Additionally, over the past few days the message on 3277 kHz has been shortened, so that only about 5 minutes of important audio was sent, vs the 10 minutes in prior use.

When numbers stations are new it is not uncommon for them to change format until they settle into a format they can use for all occasions. It is possible that V28 is still in the early days of its operation and details are still being polished as needed.

## 2 January

V28 is still active on multiple frequencies from about 1330 to about 1342 UTC daily (see note at bottom concerning no activity on Jan 01 and 02). I have seen as many as 4 frequencies active at one time, but more typically there are only 3 active at one time, with a 4th coming on air after one of the first 3 finish. All frequencies except for 3277 kHz are still extremely variable on a day to day basis.

Some transmitters used by this station have notable features.

For example the transmitter used for the approximate 3690 kHz transmission typically drifts down in frequency throughout the transmission, with the largest drift in the first minute or so of transmission. And this station often suffers from very poor audio.

The transmitter used for the approximate 3050 kHz transmission typically drifts up in frequency for the entire transmission, with the worst drift in the first couple minutes. Further, this transmitter has a stability issue, and the carrier wavers noticeably, resulting in a "warbly", or unsteady, sound to the voice.

The transmitter used on the approximate 3150 kHz transmission was very wide audio. This transmitter also often drops carrier between words or groups of words, almost as if it has a manual PTT switch and the operator unkeys sometimes.

The transmitter used for the 3277 kHz transmission appears reasonably steady and has decent audio, however it is always just a little off 3277 kHz (typically 3277 kHz +/- 0.25 kHz, most often slightly below 3277 kHz).

For all frequencies except 3277 kHz it is not unheard of for the transmitter to come on air on one frequency and then change a few kHz to another frequency. This is not drift, but rather the operator actually changing frequency. Most often it happens before audio starts, but sometimes it happens during the message. This is not common, but does happen occasionally. So far the only transmitter / frequency I have not seen do this (change frequency without leaving the air) is 3277 kHz.

An OM voice is sometimes heard during transmitter setup with test counts, but typically the messages are YL voice. Recently an OM voice has been periodically sending messages, not just test counts, on the approximate 3050 kHz or 3150 kHz transmissions.

Notice in my loggings I say "variable groups kk/yl" I have heard what appears to be 2f, 3f, and 5f groups, along with words/names. But not being a Chinese speaker I am unsure if the 2f and 3f groups are distinct groups or if they are 5f in 2/3 format. The Korean and Japanese listeners seem to be reporting 2f and 3f only, no 5f.

On January 01 and 02 no transmissions were found in the 3000 kHz to 3800 kHz range from 1330 to 1345 UTC. I do not know if this signifies anything at all, but it is possible either a frequency or time shift has taken place.

T!

Mojave Desert, California, USA

## Transcript of one of the transmissions submitted by pon09017 on HFU in Korean and the English translation.

Female operator

421 (암호4) 84 30 20 421 (암호4) 84 30 20 421 (암호4) 84 30 20 421 (암호4) 84 30 20 1 2 3 (암호3) (암호3) 1 2 3 (암호3)  
(암호3) 1 2 3 1 2 3 (암호3) (암호3) 1 2 3 1 2 3

421 (암호4) 84 30 20 421 (암호4) 84 30 20 421 (암호4) 84 30 20 1 2 3 (암호3) (암호3) 1 2 3 (암호3) (암호3) 421 (암호4) 84 30  
20 421 (암호4) 84 30 20

[421 (amho4) 84 30 20 421 (amho4) 84 30 20 421 (amho4) 84 30 20 421 (amho4) 84 30 20 1 2 3 (amho3) (amho3) 1 2 3  
(amho3) (amho3) 1 2 3 1 2 3 (amho3) (amho3) 1 2 3 1 2 3  
421 (amho4) 84 30 20 421 (amho4) 84 30 20 421 (amho4) 84 30 20 1 2 3 (amho3) (amho3) 1 2 3 (amho3) (amho3) 421  
(amho4) 84 30 20 421 (amho4) 84 30 20 ]

48 47 584 38 49 574 28 10 십(?) 배추김치? 38 15(열다) 12 8 cm 38 12 12 8 701 다시 28 41 58 701 다시 000 32 58 784 000  
(암호1) 58 칠백마흔(?) 000 (암호1) 58 287 000 (암호2) 58 270대 000 46 58 901 000 47 47 570대 000 48 47 587 000 49 57 301  
(?) 000 10 7 17 184 000 15(열다) 12 8 cm 000 12 12대 (?) 000

[48 47 584 38 49 574 28 10 sib(?) baechugimchi? 38 15(yeolda) 12 8 cm 38 12 12 8 701 dasi 28 41 58 701 dasi 000 32 58  
784 000 (amho1) 58 chilbaegmaheun(?) 000 (amho1) 58 287 000 (amho2) 58 270dae 000 46 58 901 000 47 47 570dae  
000 48 47 587 000 49 57 301 (?) 000 10 7 17 184 000 15(yeolda) 12 8 cm 000 12 12dae (?) 000]

1 2 3 (암호3) (암호3) 1 2 3 (암호3) (암호3) 421 (암호4) 84 30 20 421 (암호4) 84 30 20 421 (암호4) 84 30 20 1 2 3 (암호3)  
(암호3) 421 (암호4) 84 30 20 421 (암호4) 84 30 20 1 2 3 (암호3) (암호3) 1 2 3 (암호3) (암호3) 421 (암호4) 84 30 20 421  
(암호4) 84 30 20 1 2 3 (암호3) (암호3) 기억 니은(이응?)

[1 2 3 (amho3) (amho3) 1 2 3 (amho3) (amho3) 421 (amho4) 84 30 20 421 (amho4) 84 30 20 421 (amho4) 84 30 20 1 2 3  
(amho3) (amho3) 421 (amho4) 84 30 20 421 (amho4) 84 30 20 1 2 3 (amho3) (amho3) 1 2 3 (amho3) (amho3) 421  
(amho4) 84 30 20 421 (amho4) 84 30 20 1 2 3 (amho3) (amho3) giyeog nieun(ieung?) ]

421 (code 4) 84 30 20 421 (code 4) 84 30 20 421 (code 4) 84 30 20 421 (code 4) 84 30 20 1 2 3 (code 3) (password 3) 12 3 (code  
3) (password 3) (switched to a male voice) 12 31 23 (code 3) (password 3) 12 31 23 (back to the female voice.)  
421 (code 4) 84 30 20 421 (code 4) 84 30 20 421 (code 4) 84 30 20 1 2 3 (code 3) (password 3) 12 3 (code 3) (password 3) 421  
(code 4) 84 30 20 421 (code 4) 84 30 20

48 47 584 38 49 574 28 10 plus (?) kimchi? 38 15 (open) 12 8 cm 38 12 12 8 701 back 28 41 58 701 again 000 32 58 784 000  
(password 1) 58 chilbaek maheun (?) 000 (password 1) 58 287 000 (password 2) 58 270 46 000 58 901 47 000 47 570 48 000 47  
587 49 000 57 301 (?) 000 10 717 184 000 15 (open) 12 8 cm 000 12 12 cars (?) 000

1 2 3 (code 3) (password 3) 12 3 (code 3) (password 3) 421 (code 4) 84 30 20 421 (code 4) 84 30 20 421 (code 4) 84 30 20 1 2 3  
( password 3) (encryption 3) 421 (code 4) 84 30 20 421 (code 4) 84 30 20 1 2 3 (code 3) (password 3) 12 3 (code 3) (password 3)  
421 (code 4) 84 30 20 421 (code 4) 84 30 20 1 2 3 (code 3) (password 3) nieun station (yieung?)

#### Logs:

Freq	Date	UTC	Day	Details
3277	01-12	1330	Tue	Female operator
3277	03-12	1330	Thu	1 2 3 1 2 3 rakdusan rakdusan rakdusan, 1 2 3 1 2 3 rakdusan rakdusan rakdusan
3277	03-12	1330	Thu	message
3277	05-12	1330	Sat	Female operator
3277	06-12	1330	Sun	Female operator
3277	07-12	1330	Mon	Female operator
3689	08-12	1328	Tue	rak-doo-san
3052	08-12	1329	Tue	gong-doo-san
3277	08-12	1330	Tue	After closing, some Korean words were heard. Translation: "you sucker, stand up, bow"
3277	09-12	1330	Wed	ends at 1340 UTC. Switched to 3689 kHz after completion of the transmission 3277 kHz
3689	09-12	1330	Wed	voice traffic, not the normal V28 format.
3277	09-12	1340	Wed	Switched from 3277 kHz. Brief message
3277	10-12	1330	Thu	Female operator
3049	10-12	1330	Thu	message
3692	10-12	1332	Thu	Female operator
3687	11-12	1330	Fri	Female operator
3277	11-12	1330	Fri	Female operator
3054.6	11-12	1330	Fri	Female operator
3039	12-12	1330	Sat	Female operator
3277	12-12	1330	Sat	Female operator
3691	12-12	1330	Sat	Female operator
3692	13-12	1330	Sun	Female operator
3277	13-12	1330	Sun	Female operator



Freq	Date	UTC	Day	Details
3054.6	13-12	1335	Sun	Female operator
3693.83	14-12	1330	Mon	variable groups kk/yl ends 1339 started on 3698.85 before changing frequency
3276.87	14-12	1330	Mon	variable groups kk/yl ends 1339z
3047	14-12	1336	Mon	message
3047.1	14-12	1336	Mon	variable groups kk/yl ends 1339z
3156	14-12	1337	Mon	After closing, brief talk between a male and a female with North Korean accent was heard
3689.0	15-12	1330	Tue	variable groups kk/yl ends 1339z
3276.87	15-12	1330	Tue	variable groups kk/yl ends 1339z
3156.8	15-12	1332	Tue	variable groups kk/yl ends 1342z
3063.75	15-12	1335	Tue	variable groups kk/yl ends 1339z
3276.87	16-12	1330	Wed	variable groups kk/yl ends 1340z
3689.8	16-12	1330	Wed	variable groups kk/yl ends 1339z
3054.65	16-12	1332	Wed	variable groups kk/yl ends 1342z
3156	16-12	1332	Wed	"KIM IL SUNG, KIM JUNG IL, cold wind from Baekdu" and at 1335 UTC a scream of a woman was heard
3116.88	16-12	1339	Wed	variable groups kk/yl ends 1342z
3691.08	17-12	1329	Thu	variable groups kk/yl ends 1337z
3128.52	17-12	1330	Thu	variable groups kk/yl ends 1336z
3048.75	17-12	1332	Thu	variable groups kk/yl ends 1339z
3276.96	17-12	1338	Thu	variable groups kk/yl ends 1341z
3276.85	18-12	1329	Fri	variable groups kk/yl ends 1340z
3691.01	18-12	1330	Fri	variable groups kk/yl ends 1340z
3276.86	19-12	1330	Sat	variable groups kk/yl ends 1340z
3689.33	19-12	1330	Sat	variable groups kk/yl ends 1339z
3051.76	19-12	1333	Sat	variable groups kk/yl ends 1340z
3156.39	19-12	1340	Sat	variable groups kk/yl ends 1345z
3689.34	20-12	1331	Sun	variable groups kk/yl ends 1339z
3048.71	20-12	1333	Sun	variable groups kk/yl ends 1338z
3276.96	20-12	1340	Sun	variable groups kk/yl ends 1342z
3276.95	21-12	1330	Mon	variable groups kk/yl ends 1340z
3156.54	21-12	1330	Mon	variable groups kk/yl ends 1340z
3682.2	21-12	1331	Mon	variable groups kk/yl ends 1341z
3048.47	21-12	1338	Mon	variable groups kk/yl ends 1348z
3276.92	22-12	1331	Tue	variable groups kk/yl ends 1342z
3690.2	22-12	1331	Tue	variable groups kk/yl ends 1341z
3039.86	22-12	1332	Tue	variable groups kk/yl ends 1341z
3689.2	23-12	1329	Wed	variable groups kk/yl ends 1336z
3276.96	23-12	1330	Wed	variable groups kk/yl ends 1340z
3051.55	23-12	1331	Wed	variable groups kk/yl ends 1336z
3690.38	24-12	1329	Thu	variable groups kk/yl ends 1339z
3276.92	24-12	1330	Thu	variable groups kk/yl ends 1339z
3156.46	24-12	1331	Thu	variable groups kk/yl ends 1339z
3276.92	25-12	1330	Fri	variable groups kk/yl ends 1339z
3688.33	25-12	1331	Fri	variable groups kk/yl ends 1339z
3149.99	25-12	1337	Fri	variable groups kk/OM ends 1338z
3140.97	27-12	1332	Sun	variable groups kk/OM ends 1340z
3276.85	27-12	1335	Sun	variable groups kk/yl ends 1340z
3688.57	28-12	1330	Mon	variable groups kk/yl ends 1339z
3146.26	28-12	1330	Mon	variable groups kk/yl ends 1340z
3276.88	28-12	1330	Mon	variable groups kk/yl ends 1340z
3047.11	28-12	1331	Mon	variable groups kk/yl ends 1338z
3277	29-11	1330	Tue	Female operator
3695.8	29-12	1331	Tue	variable groups kk/yl ends 1338z

Freq	Date	UTC	Day	Details
3159.4	29-12	1332	Tue	variable groups kk/yl ends 1340z
3142.24	29-12	1335	Tue	variable groups kk/OM ends 1342z
3141.65	30-12	1330	Wed	variable groups kk/yl ends 1340z
3276.83	30-12	1330	Wed	variable groups kk/yl ends 1340z
3049.53	30-12	1332	Wed	variable groups kk/yl ends 1338z
3145.73	31-12	1330	Thu	variable groups kk/OM ends 1341z
3276.83	31-12	1330	Thu	variable groups kk/yl ends 1340z
3690.1	31-12	1331	Thu	variable groups kk/yl ends 1342z
3063.45	31-12	1339	Thu	variable groups kk/yl ends 1342z, started on 3032 kHz, then to 3044 and 3062.45 kHz

## MORSE STATIONS



**MX**

### Russian Military beacons

#### Current cluster frequencies:

3594, 4558, 5154, 7039/7508, 8495, 10872, 13528, 16332, 20048 kHz

#### Other frequencies:

L 5156.8, 6917.5, 8497.8 kHz

V 3658, 4150, 6809, 6928, 7027.5 kHz

R 5466 kHz

W, R, N, G, C, K, Z, L, V, Ü 5620, 5835, 8029, 8112, 8162, 8895 kHz (Tu-Bear net)

#### Cluster beacon slots:

.7 "D", Sevastopol

.8 "P", Kaliningrad

.9 "S", Severomorsk

.0 "C", Moscow

.1 "A", Astrakhan (inactive)

.2 "F", Vladivostok

.3 "K", Petropavlovsk Kamchatskiy

.4 "M", Magadan



**M01**

#### 5320 kHz, 24-12, 1800 UTC

197 (R) 618 618 30 30 = =

12776 12776 34502 34502 02640 02640 58886 58886 56242 56242

57977 57977 99261 99261 51775 51775 95627 95627 31604 31604

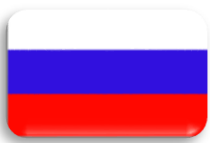
06503 06503 23421 23421 56355 56355 04295 04295 88789 88789

76038 76038 65913 65913 23853 23853 30513 30513 12220 12220

50384 50384 15471 15471 31680 31680 09402 09402 88164 88164

11546 11546 80256 80256 80618 80618 43306 43306 11939 11939

= = 618 618 30 30 000



## M01b

### **2435//3520 kHz, 07-12, 1910 UTC**

853 691 54 =  
 35322 08807 17053 58614 03490 84698 54562 04648 43108 58047  
 74655 27683 62851 67805 31339 57242 61799 70966 34326 13390  
 53407 08279 06034 83637 57445 98071 65899 73923 58073 57855  
 96643 02660 61777 41870 48822 93094 31116 97148 05532 51712  
 65 055 93468 91538 08292 74384 92707 41952 56598 37199 60106  
 38253 90871 50251 92315  
 = 691 54 000

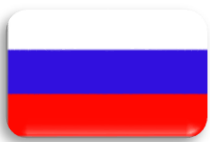
### **2425//3205 kHz, 07-12, 2015 UTC**

375 691 54 =  
 35322 08807 17053 58614 03490 84698 54562 04648 43108 58047  
 74655 27683 62851 67805 31339 57242 61799 70966 34326 13390  
 53407 08279 06034 83637 57445 98071 65899 73923 58073 57855  
 96643 02660 61777 41870 48822 93094 31116 97148 05532 51712  
 65 055 93468 91538 08292 74384 92707 41952 56598 37199 60106  
 38253 90871 50251 92315  
 = 691 54 000

### **6261 kHz, 13-12, 0557 UTC**

Id?? 863 37 =  
 08269 54763 90285 08753 39066 50292 71054 15108 99611 20519  
 60177 63472 80147 85850 78896 54066 77089 97198 93426 01352  
 07918 28172 80866 55651 49042 84824 61606 19957 50030 89028  
 38123 02921 56263 38082 23541 90870 58552  
 = 863 37 000

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## M12

### **14869 kHz, 06-12, 1030 UTC**

582 1 5204 115  
 88659 53127 17706 89194 75578 49002 47770 00405 21866 59901  
 78006 70387 59765 51906 28070 37719 61505 78947 01569 30886  
 76815 31355 07033 15947 61469 33793 74649 90321 91309 60286  
 73563 88572 98163 01305 31052 21411 97977 08162 50359 88260  
 16887 17528 52131 10264 84685 57277 02813 83128 80255 12174  
 88597 77094 99030 16136 20758 45278 94974 02175 69404 16625  
 81408 28367 71756 08465 03345 62367 56341 52429 31324 86813  
 26545 96784 44627 41551 66515 41891 54543 20814 41009 24506  
 48245 01935 88535 21012 18906 18726 84742 97110 20394 10526  
 45771 53724 51891 36314 21322 30621 69834 54552 52833 89344  
 05990 24073 24366 65709 22446 86082 24173 14192 49421 79500  
 25265 89066 22779 94162 07899  
 000 000

**12205/13559/14728 kHz, 21-12, 1100/1120/1140 UTC**

973 1 (R) 1412 141 1412 141  
78167 00503 54338 36349 11736 71794 87606 08965 72480 03030  
82931 58021 58375 04273 70172 97265 88076 21737 29211 00060  
41021 41663 52811 93591 35361 70603 17129 43762 18432 31210  
39858 19977 63059 35196 12444 49934 38073 16602 15629 99158  
32502 90453 29257 84788 08063 14078 73046 85312 73253 69449  
03241 70892 81298 25858 48840 94713 98193 05627 55411 57118  
07113 16626 61473 95849 89951 53990 85518 00471 56412 93358  
22143 07572 32493 23199 20437 56492 80144 84367 89228 87387  
62392 22658 38821 13814 99380 78186 07411 89929 05504 05338  
70325 49134 97505 88257 41315 44324 32842 14118 08907 53667  
91585 96392 32774 24295 68735 83392 00786 44955 56593 28750  
23300 75047 89838 86819 19933 62518 32271 27441 81091 99470  
31567 60160 13127 37317 08912 40677 16138 62298 02819 02815  
38907 09882 40699 97190 34318 63588 37340 63717 88042 40118  
34125  
000 000

**8047/6802/5788 kHz, 21-12, 1800/1820/1840 UTC**

463 1 (R) 3676 149 3676 149  
13330 88143 98623 47358 64037 63215 00973 02438 37461 54408  
53922 31832 43900 50717 28193 06944 79642 19950 12156 22523  
33421 41907 37190 73012 97066 10415 81295 86276 17194 22198  
55475 51990 03006 42932 97210 63810 19151 05464 68716 17342  
26463 94756 90376 95644 15558 00101 72084 27535 78683 86847  
89482 24350 53015 64245 50549 53337 36605 08694 17508 59480  
05610 11541 67783 58175 03888 21932 44718 42454 22124 47271  
11078 58982 42343 31211 88428 59057 03059 75376 09337 82283  
18388 59152 63028 37659 15601 15981 04352 75677 15839 04224  
51094 48902 58112 41185 21233 58049 49577 68177 09427 57642  
88070 90074 10806 44850 01090 66378 42030 76372 96559 35610  
82373 53959 53992 79652 25247 16619 39521 46038 06280 97726  
31261 71022 62852 12656 78607 27612 02614 52016 01780 87586  
04482 96153 04436 85925 97552 74933 40383 47266 34067 06164  
22381 54313 97921 08520 15845 46897 40303 67461 93253  
000 000

**11492 kHz, 24-12, 1540 UTC**

725 1 (R) 7140 141 7140 141  
24688 89692 69755 40339 30885 14268 91673 10457 63100 97051  
95113 71144 06619 43829 72628 45047 50907 55227 13673 13790  
84123 16813 93636 69729 22250 78422 38325 53563 03972 36295  
95302 85070 97176 17004 40220 48966 11720 65777 68723 05775  
50671 07285 86472 69860 38603 65634 46817 10153 00463 80163  
58835 38536 73365 08922 84255 59294 61323 60134 29780 08416  
27557 33223 03341 07136 13700 77845 76857 54456 14944 00162  
78592 16635 92474 80523 02295 79917 13387 26387 71664 24261  
03746 15775 35219 36289 84354 21923 80126 66620 07389 11206  
36554 47568 16793 92757 93035 41375 78352 91714 02283 07145  
58719 25460 59347 63785 67110 22068 77356 95814 53042 92789  
14704 21334 06400 28042 25989 98756 24622 12480 01362 88865  
21111 03291 27816 06544 04059 29397 97622 14231 95864 86184  
06205 38980 93424 05531 54290 25093 27058 97565 34701 64183  
35951  
000 000

**14869/12279 kHz, 27-12, 1030 UTC**

582 582 582 1 (R) 4272 149 4272 149

77835 65169 63735 28032 25828 35263 25988 91610 98387 18218  
84718 75656 60842 17965 96863 48309 24318 53305 39457 00664  
09724 32139 27698 66314 48062 59776 00335 24424 45519 92796  
15901 58906 96928 41066 91702 04997 69026 37181 09470 19448  
54611 59918 94736 75125 72856 41148 77516 88218 19814 11998  
63516 91311 79697 21215 16273 71169 09370 59535 49004 71919  
80331 21593 93694 84579 97508 90195 88140 64791 09859 89925  
69371 80214 32306 23696 51315 38753 33604 39302 53397 70840  
56731 52674 28187 07609 95182 81736 52768 64013 42455 99013  
36962 95849 01706 46005 87915 53050 94509 22062 55363 24280  
22289 91610 48551 47989 39505 80330 84871 18819 46396 81208  
83278 66785 14451 93061 95571 26148 57469 27473 65176 02222  
24952 62061 87654 94238 66152 20259 22705 29920 31369 92487  
29160 16634 62543 95039 76984 55019 16777 65434 36421 28430  
50935 46837 42247 54245 60026 68722 27269 92096 09697  
000 000

---

**M14****5430 kHz, 05-12, 0800 UTC**

171 (R) 144 144 22 22

12345 12345 23456 23456 34567 34567 45678 45678 00110 00110  
44512 44512 32324 32324 54321 54321 65432 65432 76123 76123  
12333 12333 65432 65432 65651 65651 89897 89897 01451 01451  
01234 01234 01235 01235 56711 56711 01567 01567 01929 01929  
10201 10201 01005 01005  
144 144 22 22 00000

**5240 kHz, 06-12, 2300 UTC , with error**

376 (R) 279 279 15 15

98712 98712 56767 56767 43244 43244 99934 99934 12213 12213  
66655 66655 77455 77455 43214 43214 90989 90989 34567 34567  
05058 05058 71236 71236 98120 98120 63810 63810 65567 65567  
279 279 15 15 (no zero's at the end)

**4636 kHz, 08-12, 1820 UTC, with errors**

186 (R) 1 144 22 22

12345 12345 23456 23456 34567 34567 45678 45678 00110 00110  
44512 44512 32324 32324 54321 54321 65432 65432 76123 76123  
12333 12333 65432 65432 65651 65651 89897 89897 01451 01451  
01234 01234 01235 01235 56711 56711 01567 01567 01929 01929  
10201 10201 01005 01005  
144 144 22 22 00000

---





**M21 + variants**  
*Russian Air Defence Forces*  
Во́йска ПВО Во́йска ПВО

4192 kHz, 01-12, 1922 UTC  
 3572 kHz, 23-12, 1920 UTC  
 5860 kHz, 28-12, 1303 UTC

=99232578?????  
 97659999384320 9760999383220 9761996584420 9763996089822 9762996588722  
 =1700203989403 =17000203989403 =991603??02????? 17000203989304  
 =17000203989404

---



**M24**

I had not heard this one in a while but stumbled over it unexpectedly.

**10473 kHz, 08-12, 1330 UTC**

980 564 73  
 93255 00614 34947 24244 33407 90303 43598 46126 24146 91565  
 92325 24817 07605 32613 84971 68365 43241 81801 93664 64143  
 76581 85099 14915 03084 79156 59511 05502 02842 83066 59652  
 84073 59570 58608 59645 09419 83001 08416 17553 71323 94506  
 76531 14498 54973 92839 95861 85691 64823 17242 22448 85542  
 18878 62595 29995 54026 49320 26318 63083 76522 70427 91679  
 72515 54291 99704 77237 81231 27782 43183 07070 54219 19963  
 80813 81493 70876  
 = 564 73 00000

**12093 kHz, 24-12, 1300 UTC**

980 253 77 =  
 54855 54466 90977 00715 84724 03598 28059 05632 28869 82175  
 60503 67092 29701 90606 57120 38014 01126 19977 06125 98405  
 02878 42471 60999 53448 24719 01116 82945 14506 25190 72273  
 47108 98961 74592 99324 04743 09860 96903 20986 18545 81254  
 40306 42688 13300 00230 31009 24460 09055 41508 90066 83756  
 28998 75603 17870 36665 99236 36436 75997 25921 82648 59371  
 21124 09188 14010 25590 70661 06023 28579 73759 04830 26969  
 01322 64914 34837 33224 38970 11508 91865  
 = 253 77 00000

---



**M41**  
*Russian Air Defence Forces*  
Во́йска ПВО Во́йска ПВО

**5733.5 kHz, 07-12, 0731 UTC, i.p.**

005573 32761698112436 = 005573 327616981 1036 =  
 5570 32602888108238 = 5573 3276173 8111938 =  
 5570 32607478109340 = 5573 32761878111140 =  
 5570 32607628108642 = 5573 32768498111042 =  
 5570 32607798109944 = 5573 32768938111144 =  
 5570 32661918109350 = 5573 32708778110950 =

5570 32661898100152 = 5573 32509548110452 =  
5570 32668528107054 = 5573 32509478107554 =  
5570 32668648108256 = 5573 332509998107256 =  
5573 32707921057 = 5570 32667691057

**5226 kHz, 07-12, 1531 UTC, i.p.**

869969268228 71190 1658 W2WE K  
VVV VVV WKNE  
1949 786996926912882190 1649 =  
1949 7869692 68128711 901658 ZJNL AR

**2006.5//4054.5 kHz, 17-12, 0530 UTC**

5EQB 5EQB AR

**3194 kHz, 20-12, 1931 UTC**

722 511 6400 50034 6402 982 3734 713035  
722 511 6402 60035 6404 985 4172 715035  
722 511 6404 60036 AR

**4444.5 kHz, 29-12, 1730 UTC**

EQM2 EQM2 EQM2 AR



**M89 - Chinese military**

**Stations and strings:**

V A7TR A7TR A7TR DE DI9Q DI9Q  
V 5RAB 5RAB 5RAB DE M9AB M9AB  
V 7NPE 7NPE 7NPE DE QV5B QV5B  
V 6TRW 6TRW 6TRW DE J9NS J9NS  
V 7NPE 7NPE 7NPE DE QV5R QV5R (faulty txm)  
V 8CPZ 8CPZ 8CPZ DE XW6W XW6W  
V 8DKB 8DKB 8DKB DE ODY8 ODY8  
V 8PEX 8PEX 8PEX DE TI5F TI5F  
V BNGC BNGC BNGC DE XSV85 XSV85  
V BIQ9 BIQ9 BIQ9 DE ISL2 ISL2  
V BRH0 BRH0 BRH0 DE 8NGG 8NGG  
V B9SR B9SR B9SR DE AL6R AL6R  
V CQ CQ CQ DE DP91 DP91  
V CQ CQ CQ DE DP0491 DP0491  
V DKG6 DKG6 DKG6 DE 3A7D 3A7D  
V DKSL DKSL DKSL DE ALSK ALSK  
V DKIL DKIL DKIL DE ALSK ALSK (faulty txm)  
V DP9J DP9J DP9J DE CQ CQ  
V EI0B EI0B EI0B DE JHG2 JHG2  
V GKLO GKLO GKLO DE TYUI TYUI  
V GKN7 GKN7 HKN7 DE F3J5 F3J5  
V H2FL H2FL H2FL DE DRV8 DRV8  
V JKDJ JKDJ JKDJ DE SLBC SLBC  
V M8JF M8JF M8JF DE RIS9 RIS9  
V MW3D MW3D MW3D DE 2SLC 2SLC

V N4FM5 N4FM5 N4FM5 DE NAT491 NAT491  
V PGG9 PGG9 PGG9 DE MI6Y MI6Y  
V RA5J RA5J RA5J DE BP2S BP2S  
V RXP7 RXP7 RXP7 DE CZT2 CZT2  
V S2LZ S2LZ S2LZ DE YBA6YBA6  
V SR3H SR3H SR3H DE FGH8 FGH8  
V SXL6 SXL6 SXL6 DE 9QFZ 9QFZ  
V TKLO TKLO THLO DE TYUI TYUI  
V TY9D TY9D TY9D DE EOX2 EPX2  
V VTX7 VTX7 VTX7 DE TZ7B TZ7B  
V VXL1 VXL1 VXL1 DE XIW2 XIW2  
V WZG6 WZG6 WZG6 DE 4VTG 4VTG  
V YUQW YUQW YUQW DE ASDF ASDF  
V ZRM7 ZRM7 ZRM7 DE LCM0 LCM0  
V N4FM5 N4FM5 N4FM5 DE DUT491 DUT491  
V Q5U8 Q5U8 Q5U8 DE 8QPP 8QPP  
V QHV8 QHV8 QHV8 DE 8QPP 8QPP  
VVV Q2M Q2M Q2M DE NYZ NYZ  
V DKSL DKSL DKSL DE ALSK ALSK  
V 3A3J 3A3J 3A3J DE B4ZJ B4ZJ  
V HER6 HER6 HER6 DE WU6L WU6L  
V BR3S BR3S BR3S DE JU9D JU9D  
V DGG6 DGG6 DGG6 DE 3A7D 3A7D (faulty ?)  
V TY9D TY9D TY9D DE EPX2 EPX2  
VVV VVV VVV 4GN 4GN 4GN DE DE QJ7 QJ7

VVV CQ CQ CQ DE UKNO UKNO  
VVV WNF WNF WNF DE FXM FXM  
VK6EN K6EN K63N DE D3MR D3MR  
V DF4J DF4J DF4J DE D3MR D3MR  
V FJ4B FJ4B FJ4B DE D4MR D4MR  
V SNT9 SNT9 SNT9 DE D3MR D3MR  
V DF4J DF4J DF4J DE D3MR D3MR  
V 43A 43A 43A DE A34 A34  
V K6EN K6EN K63N DE D3MR D3MR

J5VQ DE B8PQ  
F1UT DE B8PQ  
HMN7 DE B8PQ  
HUG8 DE AOKY  
SRJ8 DE AOKY  
HFG8 DE AOKY  
PK4M DE NS3V  
2RPU  
YOJS YOJS DE X9UN  
ZIER ZIER DE X9UN

5088 kHz, 01-12, 1104 UTC

VV J5VQ DE B8PQ K  
QSA 1 HR WK NR 40 K  
R ZNN SK II  
VV F1UT DE B8PQ K  
VV HMN7 DE B8PQ K  
VV F1UT DE B8PQ K  
VV

---

5373 kHz, 01-12, 1045 UTC

HUG8 DE AOKY K K QSY NR 23 NR 23 K K  
QSY NR 23 NR 23 K K  
SRJ8 DE AOKY K K  
V VVVVVV SRJ8 SRJ8 DE AOKY K K  
VVVV SRJ8 SRJ8A EEEEE  
VV H8SRJ. DE AOKY K K  
SRJ8 DE AOKY K K  
QSY NR 23 NR 23 K K  
R QRW HFG8 HFG8 K  
R QRW HFG8 K  
AS AS K SK  
VVV HFG8 HFG8 HFG8 DE AOKY K K  
QSY NR 04 K K  
VVV HF

---

5373 kHz, 01-12, 1120 UTC

D6T5 DA74 7N46 3DU6 A674 TDU6 ANA4 DU7N  
AR K (1121z)  
K K  
UVVV V  
HFG8 HG8 DE AOKY K K (1122z)  
R RR 45W UTA3 UTA3 K K (1123z)  
R R MHR GA K (1123z)

---

5442 kHz, 01-12, 1115 UTC

R RPT 55W  
BT 46NN AR K  
BOZ QSY 02 NR BOZ QSY 02 NR K  
BOZ QSY 02 NR K  
R BOZ QSY 02 NR K  
R OK OK

---

5560 kHz, 01-12, 1111 UTC

3N3T 5DN6 NAUT 76UN TNUU D5U6 5356 AR K  
QSL 1912 K (Other station also on this frequency)  
R HR NR 9 EEEE HR NR 900  
R HR ...  
R NIL SK SK GB

---

5560 kHz, 01-12, 1125 UTC

2757 AR K  
R HR NR 900 K  
NR 5660 K  
R NIL SK  
NIL SK GB

---

8067 kHz, 03-12, 0033 UTC

636T DN64 III == 3U77 3DA3 U5T5 AR K  
A Q  
2P 66W = 6NA6 AR K (Cont'd repeating groups)  
R GA

---

8006 kHz, 03-12, 0102 UTC

PK4M PK4M DE NS3V NS3V NS3V K  
CZ7. DE 2RPU 2RPU K (Other station also on this frequency)  
R QSA 2 K  
QSA 2 QSA ? K  
R QSA 2 K  
R C IEC = 2793 AR K  
R = 5483 AR K  
R HR F GA K  
R GA K  
F NR 009/EX 0902 RMKS 5512 TO 5554 =  
ABC1/CBA2 AR K (0104z)  
RR QSL 0904 K  
R U F GA K  
R F NR 109./EX .. 04 RMKS 5554 TO 5512 =  
CBA2/ABC1 AR K  
R QSL 0906 K  
R U MSG GA K  
QRJ QSY 23 K (Found on 8017, confirming that QSY 23 is 8017kHz!!!)  
R .. OK

---

8017 kHz, 03-12, 0110 UTC

UTD4 36A6 U44. UND3 ANUN AR K  
R R QSL 0914 K  
R U MSG GA K  
R HR MSG NR ..NR 01..CK ..54 1203 0914 RMKS 5554 TO 5512 =  
AT.. (Cont'd)

---

5462 kHz, 04-12, 1020 UTC, i.p.

R RPT 42W K. R RPT 59W. R QSL 1820 K. R GA K  
R AS  
R HR MSG GA  
R HR MSG GA K  
R GA K  
R HR MSG GA  
NR 001 CK 99 EEEEE  
R HR MSG GA 7G  
NR 001 CK 99 15 1204 1800 RMKS 3865 TO 2867 =  
3N7. TTD5 76A5 (Cont'd)

---

5474 kHz, 04-12, 1407 UTC

RMKS R640 TO W466 TO G468 TO Y464 TO D464 TO P464  
R IE EEE R T.T . (Other station also on this frequency)  
RMKS R464 TO W466 TO G468 TO Y464 TO D464 TO P464 K  
A GA  
RMKS AGN K  
AS

---

5119 kHz, 06-12, 1413 UTC

D4N4 5T6D 34DA AR  
R R 26W TO 28W = TUDT UTA6 AGN 26W TO 28W = TUDT UTA6  
53A7 AR  
AGN 26W TO 28W = TUDT UTA6 5367 AR  
RR HR MSG GA  
R R R R R U NR 121 CK 399 72 1206 2215 RMKS 0980 TO 0952  
R R = =  
5TTA U66U 7UD5 6D75 575A TN7N N5T3 NT73 TA63 TT33 N53D  
(Cont'd)

---

5450 kHz, 06-12, 1421 UTC  
VV YOJS YOJS DE X9UN K  
R HR QSA 2 K  
R IEC = OB AR K  
R HR NR NOT K  
R SK  
VV ZIER ZIER DE X9UN K  
R AS  
U QSY TO NR 09 A QSY TO NR 09 K  
R HR QSA 2 K  
R IEC = KI AR K  
R OK HR NR NOT K  
HR MSG GA K  
R HR MSG GA K  
R MSG NR 06/CCK CK 55 32 1206 2225 RMKS 7628 TO 7617 K  
AS  
R K  
R = =  
AD7N 47T3 DU65 5N3U T543 NT63 U4N7 DNU4 TA6N TTA7  
TDU6 4D5N 3T5A TU37 DNTA T6U4 U5T6 AN43 D673 TA6D  
AU53 765A AN54 UN3U 56UA D6A5 3N7U A65T TN43 7435  
7ADU 567U NTD6 7346 6T57 5DT7 TN3A AT34 T7A4 7436  
7D7U NTAU NDD5 47AU 754D 6U35 N7A6 4754 D74U 47A5  
5D63 4D3U AN53 T76A 57TN AR K  
AS  
U QSY TO NR 20 U QSY TO NR 20 K  
R U G EEEEE AGN U MSG GA K  
R GA

---

6666 kHz, 08-12, 1116 UTC  
NUU3 7DU3 T674 TA3A U6N5 7N65 4AA4 TDNA ... AR  
Q ... K  
R QSL ?  
SK GB  
AZ.. K  
R QSL ?  
OK SK GB  
BF5Y K  
R QSL ?  
OHEEEEE OK SK OK SK GB  
QAW1 K  
R QSL ? K  
R 23W = N5U3 N5U3 AR =  
50W 6 EEEEE  
R 23W EEEEE R 50W = 7ADT 7ADT AR =  
R 5A EEEE R 50W = 7ADT 7ADT AR K  
R 36W = T54D T54D AR K AR = AR K  
R 4.W = TDNA TDNA TD4N 4AA4 4AA  
R 48W = 4AA4 4AA4 AR K  
R 48W = 4AA4 4AA4 AR K  
R 15 EEEEE R 15W TO 18W = T43D 74D7 5A43 T43U AR  
FM 4336  
R FM = 4336 4336 AR =  
FM = 4336 4336 AR K FM 4336 4  
FM = 4336 4336 AR K

---

5588 kHz, 12-12, 1040 UTC  
III AN7D 6T66  
III 3UA6 7D5D 5TN7 DU7T (Cont'd)  
III 43N6 AR  
VVV MSG NR 048 CK 301 44 1212 1830 =  
6TDU AT54 756A (Cont'd - switched transmit speed to EXTREMELY  
FAST)  
AR  
74 VV  
FF CQ 63 RMKS 6549 TO 0963/4059.. COMM ARS =  
49139/0963/2000/117NR/6549 III =  
49139/0963/2000/117NR/6549 III =  
49139/0963/2000/117NR/6549 AR AR

5588 kHz, 12-12, 1040 UTC  
III AN7D 6T66  
III 3UA6 7D5D 5TN7 DU7T (Cont'd)  
III 43N6 AR  
VVV MSG NR 048 CK 301 44 1212 1830 =  
6TDU AT54 756A (Cont'd, switched transmit speed to EXTREMELY  
FAST)  
AR  
74 VV  
FF CQ 63 RMKS 6549 TO 0963/4059.. COMM ARS =  
49139/0963/2000/117NR/6549 III =  
49139/0963/2000/117NR/6549 III =  
49139/0963/2000/117NR/6549 AR AR

---

3333 kHz, 17-12, 1900 UTC  
5N3A D57N AT3U TANU TTA7 DUN3 AT64 AR  
R 5W R 5W = 6T47 AR K. R 5I JN 5W = = 6T47 AR K  
K JN9  
R 5W = 6AS... 5W = 6A47 AR K  
R SK

---

8888 kHz, 26-12, 0229 UTC  
HR ZNN ? HR ZNN A HR A ? HR ZNN AHA  
HR ZNN A HR JSE U 1W 3D 3110 GA HW ?  
OK H? HR ZNN A HR JSE ? ? HR ZNN AHR JET  
HR ZNN AHR WESPSE AJW 38311 GA HR ?  
HR NEW EEE DWK PSE QR. ? HR NEM HDWK PSE QRS  
CQ OK  
= = 3D4A ? ZNN BT 3D4U A7T7 T356 N65A3 A ? 5W GA =  
U56U U7T7 7 AR W  
OK = 3D4U A7T7 T356 ND65 A3U5 6AT GA =  
U47T 77A RW  
AGN  
OK DE JN = = ? ZNN BT 3D4U A7T7 T356 N.D6 I ? 4W GA =  
D65A U56U 47T7 7 AR W (0240z)  
OK I ?? ? OK = 3D4U A7T7 T456 NMD6 5A3U 56E? 6W GA =  
U47T 77 AR W  
CQ CQ OK = =  
3D75 .T70 60TO0UD4 UD5T76 AR W  
OK ZNN DE ? OK D = 3DN ? BT 3DD 75 9T 0760TO0N2DSN?  
6W GA = = UD4 EE ? 7.GA = U6E E ? 7W GA = UD5T 76 AR W  
OK BT .D4 AR W  
= = 3DD7 5070 60T7. 4U65 T76 ? AR W  
? 6W = = .4 AR W  
OK 6W GA = UD4U 65 T76 AR W  
CQ OK = 3DDT 57? = 3DDT 47U3 TU7T A7TD 5DA3 ..

---

**7777 kHz, 28-12, 1540 UTC**

F NR 13/EX 2339 RMKS 3002 TO 6071 =  
C2KB/.KF.  
FFF NR 13/EX 2339 RMKS 3002 TO 6071 =  
C2KB/DK. AR K  
R R FFF NR 13/EX 2339 RMKS 3002 TO 6071 =  
C2KB/DK3F =  
FFF NR 13/EX 2339 RMKS 3002 TO 6071 =  
C2KB/DK3F AR K  
QSL ..41 K (Other station also on this frequency - Extremely weak)  
R R AGN K  
R QSL ... K  
R R U FF GA K (1544z - Other station too weak to copy)  
R R F GA K  
R R AGN K R R AGN K  
R R QSL 2350 K  
R R AGN K  
R MSG NR 697 CK 21 87 1228 2353 RMKS 3002 TO 6071 K  
R R MSG NR 697 CK 218 71 2282353 RMKS 3002 TO 07  
MSG NR 697 CK 21 871228 2353 RMKS 3002 TO 6071 K = = =  
4DDA 3AUN 63U7 N7T6 TT45 T567 674N 345N TANA TTT7  
5U43 AT4D 6UAU D66U 7AN4 56D4 37N7 7DD3 7DUT TAAN  
TU77 =

---



**M95**

8073 kHz, 01-12, 1140 UTC  
V BNGC (x3) DE XSV85 (x2)  
BCNG DE XSV85 XSV7 EEEE \*)  
BCNG DE XSV85  
HR MSGS GA PSE CY  
NR 1018 CK 316 35 1201 1603 =  
TTA 3U6 3AN 3U7 TAU 773 TA7 773 357 (Cont'd) AR  
AS GA  
NR NR 1019 CK 39 NR 1019 CK 38 35 1201  
NR 1019 CK 38 35 1201 1606 =  
TAU N5U TTA N53 TAD N54 7TT TTU 746 (Cont'd)  
AR (Switched to V26 at 1205z)  
\*) This shows the relationship between XSV85 and XSV70

---

8073 kHz, 02-12, 0006 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR  
7G GA PSE CY  
NR 1020 CK 125 35 1202 0713 = =  
TTU 3U4 3A4 TAU 773 TA7 773 357 35N 4T3 NN3 (Cont'd) AR AR  
A HR MSG GA  
NR 1021 CK 41 35 1202 0720 = =  
TAU N5U TTU N53 TT6 N54 7TT TT3 746 7T5  
7TA 4TA N7D N35 7T5 4TN NAN 74D 33A 336  
N3U 7A3 777 TAU 773 TA7 773 TAD 773 TAN  
773 TUT 773 TU4 773 TU5 773 7AD N47 3A4  
7U5 AR  
NR 1020 CK 125 35 1202 0713 =  
TTU 3U4 3A4 TAU 773 (repeat message)

---

8041 kHz, 02-12, 0053 UTC      05 05 05

---

8073 kHz, 03-12, 1145 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
NR 1026 CK 28 35 1203 1629 =  
TAU N.U TT. (Cont'd)  
AR AGN  
NR 1026 CK 28 35 1203 1629 =  
TAU N5U TT3 (Cont'd) AR  
AS 7G GA  
NR 1027 CK 253 35 1203 1630 =  
TT3 3U6 3AN 3U7 TAU 773 TA7 773 357 (Cont'd)

---

---

7553 kHz, 04-12, 0943 UTC  
33D 4D3 TT. 773 3AD 353 4A5 N3D  
III .46 353 4T3 436 467 N3D (Cont'd)  
III .D3 3AN 354 374 (Cont'd)  
7G AGN GA  
NR 1107 CK 126 35 1204 0.00  
7.. UT4 TT4 .. (Cont'd)  
III 4D6 75D 4D3 3D4 N3D (Cont'd)  
7G AGN  
NR 1107 CK 126 35 1204 .700  
73. UT. TT. 3U4 3A5 TT4 773 (Cont'd)  
III 4D6 75D 4D3 3D4 N3D  
ZNN SK

---

8073 kHz, 04-12, 0006 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSG GA  
7G GA NR 1028 CK 99 35 1204 0715 = =  
TT4 3U4 3A4 TAU 773 TA7 773 (Cont'd) AR  
GA AGN MSG AGN  
NR 1028 CK 99 35 1204 0715 = = (Cont'd repeat message)

---

8073 kHz, 06-12, 0008 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CPY  
NR 1036 CK 136 35 1206 07UA = =  
TT6 3U4 3A4 TAU 773 TA7 773 TAD 773 TU3 773 354 (Cont'd)  
A HR MSG GA A HR MSG GA  
NR 1037 CK 36 35 1206 0726 = =  
TAU N5U TT6 N53 TT6 N54 7TT TAA 746 7T5  
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TAN  
773 TUT 773 TUU 773 TU3 773 TU4 773 TU5  
773 7AN 7AD N47 4A4 7U5 AR AR  
MSG AGN MSG AGN  
NR 1037 CK 36 35 1206 0726 = =  
TAU N5U TT6 (Cont'd)

---

8073 kHz, 07-12, 0006 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
NR 1040 CK 105 35 1207 0715 = =  
TT7 3U4 3A4 TAU 773 TA7 773 TU3 773 TU5 773 357 (Cont'd)  
AR  
NR 7G GA AGN 7G 7G AGN  
NR NR NR NR 1040 CK 105 35 1207 0715 =  
TT7 3U4 3A4 TAU 773 (Cont'd) AR AR  
NR 1041 CK 36 35 1207 0715  
NR 1041 CK 36 35 1207 0717 = =  
TAU N5U TT7 N53 TT6 N54 7TT TA3 746 7T5  
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TUA  
773 TUU 773 TU3 773 TU4 773 TU5 773 TU6  
773 7AN 7AD N47 3A4 7U5 AR  
NR 1041 CK 36 35 1207 0717  
NR 1041 CK 36 35 1207 0717 = =  
TAU N5U TT7 (Cont'd)  
AR (Switched to V26 at 0032 UTC)

---

8073 kHz, 08-12, 1137 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
NR 1046 CK 169 35 1208 1553 =  
TTD 3.. 3.3U7 TAU 773 TA7 773 354 (Cont'd) AR  
MSG AGN  
NR 1046 CK 169 35 1208 1553 =  
TTD 3U6 33U TAU 773 TA7 773 354 (repeat message) AR  
A HR MSG GA  
NR 1047 CK 3U 35 1208 1557 =  
TAU N5U 7N5 3TA TNA (groups runned together)

---

8073 kHz, 09-12, 0005 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSG GA HR MSG GA MSG GA  
NR NR 1048 CK 111 35 1209 0704 =  
TTN 3U4 3A4 TAU 773 TA7 773 354 365 (Cont'd)  
AR AR AR 7G GA  
NR 1049 CK 42 35 1209 0708 =  
TAU N5U TTN N53 TT6 N54 7TT TA7 746 (Cont'd)

---

5555 kHz, 09-12, 1123 UTC  
05 05 05 05  
SK SK SK ON A OK OK SOK SK SK SK SK SK SK SK SK  
OK SK OK  
GA K  
R GA K  
05 05 05 (Cont'd)  
NR NR 4047 CK CK CK CK CK CK CK 801483 EEE  
05 05 NR NR NR NR NR NR NR NR NR NR 409 CK CK 8 NKK CK . CK 80  
CCK  
CK SGA  
NR GA GA K  
R RR GA K  
R GA K

---

8073 kHz, 09-12, 1136 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
MSG NR 1050 CK 168 35 1209 1558 = =  
TTN 3U6 3AN 3U7 TAU 773 TA7 773 354 367 (Cont'd) AR  
A HR MSG GA  
MSG NR 1051 CK 21 35 1209 1601 = =  
TAU N5U TTN N53 TAD N54 7TT TAD 746 7T5  
77T 6TN 7AA 7AD DU4 7U4 U6D U5U 7T5 6T7  
7U5 AR AR  
MSGS AGN  
MSGS AGN =  
MSG NR 1050 CK 168 35 1209 1558 = =  
TTN 3U6 3AN 3U7 (repeat message)

---

7554 kHz, 10-12, 1001 UTC  
436 467 4D. 3D5 N3N 3D.  
End not heard

---

8073 kHz, 10-12, 1137 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSG GA PSE CY  
NR 1053 CK 268 35 1210 1609 = =  
TAT 3U6 3AN 3U7 TAU 773 (Cont'd)

---

8073 kHz, 10-12, 0015 UTC  
NR 1054 CK 111 35 1211 0712 =  
TAA 3U4 3A. TAU 773 353 4T3 NN3 (Cont'd) AR AR  
(Switched to V26 at 0023 UTC)

---

7553 kHz, 10-12, 0927 UTC  
3D4 N3D 3D3 TT. 773 357  
AR MSG GA  
NR 1130 CK 1.7 35 1211 1625  
7N7 UT3 TAA 3U5 TT. 773 3AD 357 4T3 N3D 4T7  
445 4D6 33. 4D3 3AN 354 373 4T7 N3D 4A5 445 (Cont'd) AR  
AGN  
NR 1130 CK 1.7 35 1211 1625  
7N7 UT3 TAA 3.6 TT4 773 3AD 357 (Cont'd)  
MSG GA  
NR 6. CK 5 0000 40009 1211 1700 =  
7D6 665 N.. (Cont'd)  
AGN  
NR 65 CK 5 0000 4000 1211 1700  
7D6 66....  
NR 1128 CK 132 35 1211 1640  
N37 UT3 TAA 3U4 (Cont'd)

---



8073 kHz, 12-12, 0006 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSG GA PSE CY  
NR 1056 CK 96 35 1212 0716 = =  
TAU 3U4 3A4 TAU 773 TA7 (Cont'd)

---

8073 kHz, 12-12, 1128 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR 7G GA  
HR 7G GA  
NR 1057 CK 299 35 1212 1625 = =  
TAU 3U6 3AN 3U7 TAU 773 TA7 773 TU4 773 TU5 773 (Cont'd)

---

8073 kHz, 16-012, 0015 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
MSG NR 1078 CK 113 35 1216 0711 = =  
TA6 3U4 3A4 TAU 773 TA7 773 353 4T3 NN3 44D (Cont'd)  
MSG RPT GA  
MSG RPT GA =  
7G NR 1078 CK 113 35 1216 0711 = =  
TA6 3U4 3A4 TAU 773 TA7 773 353 4T3 NN3 44D (Cont'd repeat message)  
AR 7G GA 7G GA  
NR 1079 CK 52 35 1211 EE  
MSG NR 1079 CK 52 35 1216 0714 = =  
TAU N5U TA6 N53 TT6 N54 7TT TT7 746 7T5 (Cont'd)  
AR HR MSG GA 7G  
NR 1080 CK 45 35 1216 0710 =  
T.. N5U TA6 N53 TT6 (Cont'd)  
AR (Only sent about 10 groups - Switched to V26 at 0039 UTC, female operator)

---

8073 kHz, 18-12, 1152 UTC  
V BNGC (x3) DE XSV85 (x2)  
7G GA PSE CY  
NR NR 1095 CK 48 35 1218 1642 =  
TAU N5U TAD N53 TAD N54 7TT TAU 746 7T5  
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TUA  
773 TUU 773 TU3 773 TU4 773 TU5 773 T3U  
N (Pause)  
TUA 773 TUU 773 TU3 773 TU4 773 TU5 773  
TU6 773 TU7 773 TUN 773 T3T 773 T3A 773  
T3U 773 T33 773 7AN 7AD N47 3AN 7U5 III  
AHR MSG GA  
NR 1096 CK 358 35 1218 1652 =  
TAD 3U6 3AN 3U7 (Cont'd)  
AR  
MSG AGN  
NR 1095 CK 48 35 1218 1642 =  
TTU N54 ? N5U N53 TAD N54 7TT (Cont'd)

---

8073 kHz, 15-12, 1140 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE CY  
NR 1074 CK 270 35 1215 1610 = =  
TA5 3U6 3AN 3U7 TAU 773 (Cont'd)

---

8073 kHz, 28-12, 0007 UTC  
V BNGC (x3) DE XSV85 (x2)  
HR MSGS GA PSE IIIII  
HR MSGS GA PSE CPY  
NR 1123 CK 129 35 1228 0709 = =  
TUD 3U4 3A4 TAU 773 TA7 773 TAD 773 TU3 773 (Cont'd)  
AR AR AH R MSG GA  
NR 1124 CK 32 35 1228 0730 = =  
TAU N5U TUD N53 TT6 N54 7TT TT4 746 7T5  
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TU3  
773 TU4 773 TU5 773 TUN 773 7AN 7AD N47  
3A4 7U5 AR AR AR AR  
MSG AGN  
NR 1123 CK 129 35 1228 0709 =  
TUD 3U4 3A4 TAU 773 (repeat message)  
AR  
HR MSG GA  
NR 1124 CK 32 35 1228 0730 =  
TAU N5U TUD N53 TT6 N54 7TT TT4 746 7T5 (Repeats message)  
AR AR (Switched to V26, male Operator at 0039 UTC)

8073 kHz, 31-12, 0011 UTC  
V BNGC (x3) DE XSV85 (x2)  
AR  
AHR MSG GA  
7G NR 1136 CK 48 35 1231 0709 =  
TAU N5U T3A N53 TT6 N54 7TT TAT746 7T5  
77T DN3 7T7 TA7 773 TA7 773 TAD 773 TAN  
773 TUT 773 TUA 773 TUU 773 TU3 773 TU4  
773 TU5 773 TU6 773 TU7 773 TUN 773 T3T  
773 T3U 773 7AN 7AD N47 3A4 7U5 AR  
(Switched to V26 at 0022 UTC)

Note from JP:  
Total messages for XSV85 for 2015 will be 1137 or 1138. Should start at zero 01 Jan 16.



This net was first reported in November 2015 by JPL. It is most likely located in the far east.

Callsigns: YRM (net control), KLF, GEI, HOI?, ME?, NCJ, ROZ, VOI, VOR, WAL, XRJ, 4ON  
Frequency: 10470 kHz  
Mode: Morse  
Schedule: Daily at ca 0130 UTC. Mostly radio checks from YRM with remote stations.

#### Notes:

YRM signal is normally very strong, while all of the outstations are EXTREMELY weak. ROZ is the one that is heard in Siberia and Hong Kong, but YRM very seldom hears ROZ. DE and QSV is always sent by YRM. Outstations normally only send their callsign. Sometimes they send a few VVV. Below the transmission of 28-12. JP indicated who is sending what to make it more clear. Stations are marked as A, B, C, D and E.

A: VVV CQ (X11) DE YRM YRM QSV K	<b>10470 kHz, 04-12, 0129 UTC</b>	<b>10470 kHz, 06-12, 0129 UTC</b>
B: HOI	VVV ROZ ...	VVVV C CQ (x8 DE YRM YRM
A: DE	ROZ ...	VVVV CQ (x 5) DE YRM YMQSV K
C: ROZ	CQ CQ CQ CQ CQ CQ CQ CQ DE YRM YRM	QSV K
D: GEI	VVV QSV K	HOI (Other station also on this frequency –
A: ROZ ZNN VA	ROZ ROZ	Very weak)
E: XRJ	KLF ZNN VA	DE
A: QSV K QSV K	QSV K	4ON
E: XRJ	QSV K	VOR
A: QSV K QSV K	XR.	ZNN
E: XRJ	DE	VA
A: QSV K	XRJ	VOR VOR ZNN VA
E: XRJ	XRJ ZNN	
A: XRJ XRJ	Z	<b>10470 kHz, 10-12, 0130 UTC</b>
E: R	VA	VVV VVV VVV ROZ ROZ ROZ
A: ZNN	VA	VVVV CQ CQ CQ CQ DE YRM YRM YRM VVV
E: VA	QSV K	CQ CQ CQ DE YRM YRM YRM YRM QSV K
A: VA QSV K QSV K DE	ROZ	VVV VVV VVV
C: VVV ROZ ROZ	QSV K	VVV CQ CQ CQ CQ DE YRM YRM YRM VVV
F: DE KLF KLF ZNN	ROZ ROZ	CQ CQ CQ CQ DE YRM YRM YRM QSV K
A: VA	CQ CQ CQ CQ CQ C DE YRM YRM VVV QSV K	OZ ROZ ROZ
C: ROZ	VVV ROZ ROZ	DE
A: DE	ROZ	XRJ ZNN VA
C: VVV ROZ ROZ ROZ	VVV ROZ	ROZ
	DE	VVV CQ CQ CQ CQ CQ QSV K L
	ROZ	VVVV
	ROZ ZNN	DE DE
	VA	KLF ZNN ZNN
	QSV K	VVV CQ CQ CQ DE YRM YRM QSV K (0133z)
	QSV K	VVVV VVV VVV ROZ ROZ
		QSV K
		ROZ ROZ ROZ
		VVV CQ CQ CQ CQ CQ CQ QSV K
		ROZ ROZ ROZ
		VVV CQ CQ CQ CQ DE YRM YRM YRM ZNN
		ZNN VA
		ROZ ROZ
		4OI 4OI 4OI

**10470 kHz, 11-12, 0131 UTC**

YRM YRM YRM VVV QSV K  
 VVV ROZ ROZ  
 DE DE  
 ROZ  
 QSV K  
 XRJ XRJ  
 R  
 ZNN ZNN VA VA  
 DE  
 ROZ  
 QSV K  
 VVVVV  
 DE  
 ROZ  
 DE  
 VOR VOR  
 KLF KLF  
 R  
 ZNN  
 R  
 VA  
 ROZ  
 QSV K  
 VVV  
 VOI  
 VOR  
 ZNN  
 VA  
 R  
 QSV K  
 VVV ROZ  
 QSV K  
 ROZ  
 VVV VVV VVV ROZ ROZ

**10470 kHz, 13-12, 0131 UTC**

VVV CQ (x3) DE YRM (x3)  
 VVV CQ (x3) DE YRM (x4) QSV K  
 VVV CQ (x3) DE YRM (x4) QSV K  
 VVV CQ (x3) DE YRM (x3) QSV K  
 VVV CQ (x3) DE YRM (x3) QSV K  
 VVV CQ (x3) DE YRM (x3) QSV K  
 VVV CQ (x3) DE YRM (x3) ZAN ZAN VA I

**10470 kHz, 15-12, 0130 UTC**

VVV CQ DE YRM  
 VVV CQ DE YRM QSV K  
 V KLF  
 KLF  
 R  
 ZNN  
 R  
 VA  
 DE  
 VVV CQ DE YRM QSV K  
 R V  
 XRJ  
 ZNN  
 VA  
 VVV CQ DE YRM QSV K  
 VVV CQ DE YRM QSV K  
 VVV CQ DE YRM ZAN ZAN VA I

**10470 kHz, 16-12, 0130 UTC**

VVV KLF  
 CQ DE YRM VVV QSV K  
 XRJ  
 DE  
 XRJ XRJ  
 R  
 ZNN ZNN VA VA  
 QSV K  
 QSV K  
 CQ DE YRM QSV K  
 CQ DE YRM VVV QSV K  
 QSV K  
 WAL  
 KLF  
 R  
 KLF ZNN  
 VA  
 QSV K  
 QSV K  
 CQ DE YRM VVV QSV K  
 VV ROZ ROZ ROZ

**10470 kHz, 28-12, 0130 UTC**

VVV CQ (x11) DE YRM YRM QSV K  
 HOI  
 DE  
 ROZ  
 GEI  
 ROZ ZNN VA  
 XRJ  
 QSV K QSV K  
 XRJ  
 QSV K QSV K  
 XRJ  
 QSV K  
 XRJ  
 XRJ XRJ  
 R  
 ZNN  
 VA  
 VA QSV K QSV K DE  
 VVV ROZ ROZ  
 DE KLF KLF ZNN  
 VA  
 ROZ  
 DE  
 VVV ROZ ROZ ROZ

**10470 kHz, 30-12, 0129 UTC**

VVV CQ CQ CQ CQ DE YRM YRM VV  
 CQ CQ CQ DE YRM YRM YRM QSV K  
 VV CQ (x3) DE YRM YRM YRM QSV K  
 4ON  
 .OZ  
 VVV CQ CQ CQ DE YRM YRM QSV K  
 VOI VOI  
 DE  
 VOI  
 KLF KLF  
 ROZ ZNN VA  
 VA  
 VVV CQ CQ CQ QSV K  
 KLF  
 R  
 ZNN  
 VA  
 VVV CQ CQ DE YRM YRM QSV K  
 DE  
 XRJ XRJ ZNN  
 VA  
 VV VV VV ROZ ROZ  
 VVVV ROZ ROZ

**UM10 - 10-minutes net**

6773 kHz, 02-12, 0037 UTC JZUN (new callsign/new freq)  
 3363 kHz, 02-12, 2111 UTC 6G5Y  
 6793 kHz, 03-12, 0050 UTC PROD (new callsign)  
 3363 kHz, 06-12, 1837 UTC 6G5Y

3363 kHz, 08-12, 2336 UTC 6G5Y  
 6793 kHz, 11-12, 0026 UTC PROD  
 3329 kHz, 24-12, 2050 UTC WORZ  
 3329 kHz, 25-12, 1658 UTC WORZ



### HM01

#### Dirección General de Inteligencia

HM01 test. Info received from Danix.

During the HM01 transmission on 11635 kHz, 04-12, 1800 UTC, an RDFT burst was being sent over and over on top of the normal HM01 transmission. This burst contained a 936-byte file ppp2.txt with the following sentence repeated 18 times: "esto es una prueba de tx con mto de yvc....saludos". Translated by a Spanish-speaking Priyom member as: "this is a TX test with 'mto' from 'yvc'... greetings"

### M42 & X06



Modes:

Various digital modes, CW,  
Tones (Мазенка / Mazielka)

### Russian Government & Intelligence



M42 – various modes

Freq	Date	UTC	Details	Mode
10806	1-12	1323	Russian Intel. Burst every 10 secs	5x MFSK-16 + 250bd BPSK
15626	1-12	0830	Russian Intel. QSX 16166. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16166	1-12	0830	Russian Intel. QSX 15626. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12
7823	2-12	1315	Russian Intel. Null message. Ended 1316 UTC.	MFSK-4/150bd/4000Hz/ACF=12
10930	2-12	1345	Russian Intel. QSX 12156. Ended 1444 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11163	2-12	1515	Russian Intel. Null message. Ended 1516 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11452	2-12	1420	Russian Intel. Broadcast. Ended 1429 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11482	2-12	1340	Russian Intel. QSX 12156. QSY to 10930 at 1345 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12156	2-12	1340	Russian Intel. QSX: first 11482, then 10930. Ended 1444 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15639	2-12	1505	Russian Intel. Null message. Ended 1506 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15967	2-12	1430	Russian Intel. Broadcast. Ended 1439 UTC.	MFSK-4/150bd/4000Hz/ACF=12
9300	3-12	1143	Russian Intel. Ended 1202 UTC.	MFSK-4/150bd/4000Hz/ACF=12
10906	3-12	1345	Russian Intel. QSX 12156. Ended 1442 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11452	3-12	1420	Russian Intel. Broadcast. Ended 1429 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11482	3-12	1340	Russian Intel. QSX 12156. QSY'd to 10906 at 1345 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12156	3-12	1340	Russian Intel. QSX: first 11482, then 10906. Ended 1442 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12156	3-12	1430	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12
15782	3-12	0700	Russian Intel. Null message. Ended 0701 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15967	3-12	1430	Russian Intel. Broadcast. Ended 1439 UTC.	MFSK-4/150bd/4000Hz/ACF=12
17471	3-12	0650	Russian Intel. Null message. Ended 0651 UTC.	MFSK-4/150bd/4000Hz/ACF=12

Freq	Date	UTC	Details	Mode
18100	3-12	1310	Russian Intel. Burst every 10 secs	5 x MFSK-16 10Bd 20Hz + BPSK 250Bd
11617	4-12	1100	Russian Intel. Null message. Ended 1101 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15626	4-12	0830	Russian Intel. QSX 16166. Ended 0842 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15933	4-12	1050	Russian Intel. Null message. Ended 1051 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16166	4-12	0830	Russian Intel. QSX 15626. Ended 0842 UTC.	MFSK-4/150bd/4000Hz/ACF=12
9300	7-12	1520	Russian Intel. Test session. Ended 1522 UTC.	MFSK-4/150bd/4000Hz/ACF=12
11462	7-12	0832	Russian Intel. QSX 12173. Ended 0921 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12173	7-12	0830	Russian Intel. QSX: at first 13856, then 11462. Ended 0921 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12173	7-12	0845	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12
13856	7-12	0830	Russian Intel. QSX 12173. QSY'd to 11462 at 0832 UTC.	MFSK-4/150bd/4000Hz/ACF=12
14983	7-12	0910	Russian Intel. Broadcast. Ended 0918 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16083	7-12	0900	Russian Intel. Broadcast. Ended 0908 UTC.	MFSK-4/150bd/4000Hz/ACF=12
7823	8-12	0915	Russian Intel. Null message. Ended 0916 UTC.	MFSK-4/150bd/4000Hz/ACF=12
7823	8-12	1315	Russian Intel. Null message. Ended 1316 UTC.	MFSK-4/150bd/4000Hz/ACF=12
10943	8-12	0630	Russian Intel. Null message. Ended 0631 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15626	8-12	0830	Russian Intel. QSX 16166. Ended 0837 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16166	8-12	0830	Russian Intel. QSX 15626. Ended 0837 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15622	10-12	0845	Russian Intel. Broadcast. Ended 0850 UTC.	MFSK-4/150bd/4000Hz/ACF=12
9300	11-12	1050	Russian Intel. Test session. Ended 1053 UTC.	MFSK-4/150bd/4000Hz/ACF=12
13440	11-12	0929	UCU de UCC QSY 20254 K. QSA 4 QRU NIL SK	CW
15626	11-12	0830	Russian Intel. QSX 16166. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16166	11-12	0830	Russian Intel. QSX 15626. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12
12173	14-12	0830	Russian Intel. QSX 13856. Ended 0913 UTC.	MFSK-4/150bd/4000Hz/ACF=12
13856	14-12	0830	Russian Intel. QSX 12173. Ended 0913 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16083	14-12	0900	Russian Intel. Broadcast. Ended 0905 UTC.	MFSK-4/150bd/4000Hz/ACF=12
16166	14-12	0830	Russian Intel. QSX 15626. Ended 0848 UTC.	MFSK-4/150bd/4000Hz/ACF=12
8171	15-12	1305	Russian Intel. Broadcast. Ended 1315 UTC.	MFSK-4/150bd/4000Hz/ACF=12
15626	15-12	0830	Russian Intel. QSX 16166. Ended 0848 UTC.	MFSK-4/150bd/4000Hz/ACF=12
3185	16-12	0547	UTN7 de UZC2 GM QRU GB 73 SK	CW
4795	16-12	0503	Russian Intel. Broadcast. Ended 0514 UTC.	MFSK-4/150bd/4000Hz/ACF=12
4858	16-12	0357	Russian Intel. Broadcast. Ended 0409 UTC.	MFSK-4/150bd/4000Hz/ACF=12
5356	16-12	0349	Russian Intel. Broadcast. Ended 0355 UTC.	MFSK-4/150bd/4000Hz/ACF=12
5449	16-12	0453	Russian Intel. Broadcast. Ended 0501 UTC.	MFSK-4/150bd/4000Hz/ACF=12
7823	16-12	1315	Russian Intel. Broadcast. Ended 1323 UTC.	MFSK-4/150bd/4000Hz/ACF=12
8171	16-12	1305	Russian Intel. Broadcast. Ended 1313 UTC.	MFSK-4/150bd/4000Hz/ACF=12
8171	16-12	1310	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12
4795	17-12	0503	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
4858	17-12	0357	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
4858	17-12	0410	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
5356	17-12	0357	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
5449	17-12	0453	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
7823	17-12	1315	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
7823	17-12	1345	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
8171	17-12	1305	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
9971	17-12	1100	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
12073	17-12	1050	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
7859	18-12	0730	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
7859	18-12	1110	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
9300	18-12	0653	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
14729	18-12	1045	Russian Intel. Null message	MFSK-4/150bd/4000Hz/ACF=12
15623	18-12	0845	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
15626	18-12	0830	Russian Intel. QSX 16166	MFSK-4/150bd/4000Hz/ACF=12

Freq	Date	UTC	Details	Mode
16166	18-12	0830	Russian Intel. QSX 15626	MFSK-4/150bd/4000Hz/ACF=12
18192	18-12	1035	Russian Intel. Null message	MFSK-4/150bd/4000Hz/ACF=12
18512	18-12	0855	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
3838	19-12	0730	NLAT de VGKE QSA NO QSY92516 QSA NO SK	CW
7823	21-12	1245	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
12173	21-12	0830	Russian Intel. QSX 13856	MFSK-4/150bd/4000Hz/ACF=12
13856	21-12	0830	Russian Intel. QSX 12173	MFSK-4/150bd/4000Hz/ACF=12
14983	21-12	0911	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
15623	21-12	0918	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
16083	21-12	0900	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
18696	21-12	0830	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
6830	23-12	0642	VVV RYF2 DE RWI QSA?	CW
10595	23-12	0752	RKD48: Moscow	FSK 100/500
6795	24-12	0728	RXZ32: St.Petersburg	FSK 50/500
13428	24-12	1045	Russian Intel. Null message	MFSK-4/150bd/4000Hz/ACF=12
15861	24-12	1035	Russian Intel. Null message	MFSK-4/150bd/4000Hz/ACF=12
15623	25-12	0845	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12
15626	25-12	0830	Russian Intel. QSX 16166	MFSK-4/150bd/4000Hz/ACF=12
16166	25-12	0830	Russian Intel. QSX 15626	MFSK-4/150bd/4000Hz/ACF=12
9140	28-12	0805	Russian PtP RUU70 call to RRF30 for ZHC? Then idling and into crypto	FSK 100/500
10380	28-12	0926	RBW43: Murmansk	FSK 100/500
11025	28-12	0813	RKV23: Tyumen	RUS-ARQ 100/500
4820	30-12	0652	Russian PtP station. CW call up RHM2 DE RWV72 ZHC? into data	RUS-ARQ 100/500
5325	30-12	0720	Russian PtP station. RND79 wkg RFT6 and RBW	RUS-ARQ 100/500
5440	30-12	0721	Russian PtP station. RWD59 idling	RUS-ARQ 100/500
6950	30-12	0743	CW call up RCZ32 DE RZT71 ZSC then into FSK 100/500	CW
7630	30-12	0747	Russian PtP station Kirov. RDP5 wkg RMC-27	RUS-ARQ 100/500
M42b – FSK 50/500				

5745 kHz, 01-12, 1817 UTC	IWBT DE CUFD K QSY 29298
8157 kHz, 04-12, 1031 UTC, i.p.	QSA ? K QTC 1 ZZC ZVP 4D K (followed by RYRYRY in FSK 50/500) OK Z.. K QRV W EEEE QRV ? K ZTH QRV ? K NW = 417 100 04 1025 4321 = 1039 K CFM D NIL QRU ? K OK SLV K R 215 1042 K VA
5091 kHz, 03-12, 1344 UTC	Ops chat in Morse, messages in FSK 50/500. CFM QRV K R 527 1352
4040 kHz, 05-12, 1517 UTC	Ops chat in Morse, messages in FSK 50/500. CUFD de IWBT K and QSY 26688 K and QSY 25487 K
4023 kHz, 05-12, 1813 UTC	Ops chat in Morse, messages in FSK 50/500. CUFD de IWBT QTC 1 K 696 288 5 1700 37834 (5FGs) QRX21477/21580 QSY 25238/26600 QSW 24766/26915 K AR



3785 kHz, 23-12, 0544 UTC      132 51 23 0135 198 FM 75173 FM 75173 FOR 75980 FOR 75980 97627 08044 2988753  
85762 98543 ...  
R 132 0607 FM 75173 FM 75173 FOR 75980 FOR 75980 K  
CFM QTC1 K  
QRV K  
NW = 583 51 23 0514 238 FM 75169 FM 75169 FOR 75980 FOR 75980 K K  
NW = 21279 87321 10864 48593 59472 17406 05827 17486 39865 ...  
R 583 0620 FM 75169 FM 75169 FOR 75980 FOR 75980 K  
CFM NIL K. SK SK

3785 kHz, 23-12, 0544 UTC      132 51 23 0135 198 FM 75173 FM 75173 FOR 75980 FOR 75980 97627 08044 2988753  
85762 98543 ...  
R 132 0607 FM 75173 FM 75173 FOR 75980 FOR 75980 K  
CFM QTC1 K QRV K NW = 583 51 23 0514 238 FM 75169 FM 75169 FOR 75980 FOR 75980 K  
NW = 21279 87321 10864 48593 59472 17406 05827 17486 39865 ...  
R 583 0620 FM 75169 FM 75169 FOR 75980 FOR 75980 K CFM NIL K SK SK

Freq	Date	UTC	Details	Mode
5745	1-12	1817	IWBT DE CUFD K QSY 29298	CW
3833	2-12	1554	Russian diplo/intel. Ops chat in CW, message in FSK 50/500. QTC 1 ZZC K. CFM BIL SK	CW
4028	2-12	1607	Russian diplo/intel. Ops chat in CW, message in FSK 50/500. QTC 1 ZZC K. CFM BIL SK	CW
5091	3-12	1344	Ops chat in Morse, messages in FSK 50/500 CFM QRV K R 527 1352	CW
8157	4-12	1031	QSA ? K. QTC 1 ZZC ZVP 4D K. RYRYRY in FSK 50/500.	CW
4023	5-12	1813	Ops chat in Morse, messages in FSK 50/500 CUFD de IWBT QTC 1 K. QRX21477/21580 QSY 25238/26600 QSW 24766/26915 K and AR	CW
4040	5-12	1517	Ops chat in Morse, messages in FSK 50/500 CUFD de IWBT K and QSY 26688 K and QSY 25487 K	CW
4561	7-12	1521	G3WM wkg SK8I. Ops chat in CW, message in FSK 50/500	CW
5211	7-12	1624	Ops chat in CW, message in FSK 50/500	CW
7352	8-12	0917	de FI8R K. ZVP. QRV R 249 0921 (ops chat in CW, message in FSK 50/500) QRU NIL SK	CW
4640	10-12	1841	TYA1 comms checks PI2W (ops chat in CW and message in FSK 50/500)	CW
4871	10-12	1920	G3WM comms checks SK8I (ops chat in CW and message in FSK 50/500)	CW
12224	10-12	0718	UCC QSA NO QSY 18177 18177 and QSA 4 NIL SK	CW
11140	11-12	0926	UCC de UCU QSY 13440 K	CW
4024	14-12	1318	Message in FSK 50/500 and ops chat in CW: QRU NIL SK	FSK 50/500
2002	15-12	1827	NT9P wkg K4MT	FSK 50/500
4837	15-12	1549	AIFH wkg CDAP	CW
3628	16-12	0613	PLXW wkg PZAK (Ops chat in Morse, message in FSK 50/500)	CW
5013	16-12	0722	587 221 16 0700 3873 K. QRU NIL SK (Ops chat in Morse, message in FSK 50/500)	CW
2053	17-12	1556	KI WV: QRU QRV KNIL SK (Traffic in FSK 50/500)	CW
14441	17-12	0806	Traffic in FSK and opchat in CW: OK QSW 98113 K	FSK 50/500
14623	17-12	0814	Traffic in FSK and opchat in CW: QRU QRV KNIL S	FSK 50/500
15621	17-12	0800	Traffic in FSK and opchat in CW: OK QSW 89931 K	FSK 50/500
14441	19-12	0818	K9VE wkg IC8U (Message FSK 50/500 and ops chat in Morse) QSX 18049 kHz	CW
14623	19-12	0814	K9VE wkg IC8U (Message FSK 50/500 and ops chat in Morse)	CW
18049	19-12	0816	IC8U wkg K9VE. QSA NO QSY 11481	CW
12210	20-12	0039	Traffic in FSK 50/500 and opchat in Morse: QRU NIL SK	FSK 50/500
5437	21-12	0617	Traffic in FSK 50/500 and ops chat Morse: QRU NIL SK. QSX on 4856 kHz	FSK 50/500
3785	23-12	0544	132 51 23 0135 198 FM 75173 FM 75173 FOR 75980 FOR 75980 97627 08044 ... FM 75169 FM 75169 FOR 75980 FOR 75980 K. CFM NIL K. SK	CW
3875	23-12	0633	NET Station wkg TZ9X	CW
3875	23-12	0633	Net station wkg TZ9X (ops chat in CW, message in FSK) : QRU NIL SK	FSK 50/500
4035	23-12	0641	TZ9X 942 72 23 0650 6534 k 01010 25202 71202 20616 71202 21344 56561	CW
4607	23-12	1145	TZBP de MNBV QSY 88542 K. QSA NO SK SK	CW
4753	23-12	1213	EBCW de ZE4A QSA NO K	CW

Freq	Date	UTC	Details	Mode
4759	23-12	1246	MI4A QTC 10 K MI4A NW = 946 51 22 1830 183 = FM 75151 FM 75151 FOR 75980 FOR CW 75980 = 39718 79956 06674 ...	
5343	23-12	1233	S3MF wkg MI4A (MIA4 send QLP 20) QSX 4759 kHz	CW
5363	23-12	1239	S3MF wkg MI4A (QSX 4759 kHz)	CW
4856	26-12	0626	Traffic in FSK and Morse: QRU NIL SK	FSK 50/500
4012	29-12	0740	Traffic in FSK and opchat in CW: QRU NIL SK	FSK 50/500
6925	30-12	0645	PRAT wkg LKDW (Traffic in FSK, opchat in CW) QRU NIL SK	FSK 50/500
3628	31-12	0605	PLXW wkg PZAK	CW
3817	31-12	0610	PLXW de PZAK QSA NO QSY 45123 QSA NO SK	CW
6925	31-12	0648	PRAT wkg LKDW (Traffic in FSK and opchat in CW) QRU NIL SK	CW

M42c – FSK 200/500. Frequencies mentioned are in USB = center frequency -2 kHz

Note that the Wednesday transmissions always contain long messages. Often 400+ groups.

12162 kHz, 01-12, 1010 UTC	Tests RYRYRY
12162/10334/8014 kHz, 01-12, 1015/1025/1035 UTC	2 msgs =8041 8161108742269652 ... )57655 00000+++++++151
4027/5324/7682 kHz, 01-12, 2000/2010/2020 UTC	=8321 75488015891171573 ... )57614200000+++++++132
12162/10334/8014 kHz, 02-12, 1015/1025/1035 UTC	=8401 072758390566084120 ... )57614500000+++++++23
12162/10334/8014 kHz, 03-12, 1015/1025/1035 UTC	2 msgs =8761 78507871718305343 ... )57655 00000+++++++151
5782 kHz, 03-12, 2000 UTC	)5761 00000+++++++162
12162/10334/8014 kHz, 04-12, 1015/1025/1035 UTC	)5761 00000+++++++162
20560/18192/16105 kHz, 05-12, 1300/1310/1320 UTC	)5761 00000+++++++162
8129/6822/4469 kHz, 05-12, 1810/1820/1830 UTC	RYRYRY )5761 00000+++++++162
12162/10334/8014 kHz, 07-12, 1015/1025/1035 UTC	=8631 17481701587733772 ... )7641382941100000+++++224
12162/10334/8014 kHz, 08-12, 1015/1025/1035 UTC	(1601110009777764310703000699
	=8301 32613504480305699 ... )58161 ++++++++13
12162/10334/8014 kHz, 09-12, 1015/1025/1035 UTC	(1601110009777764310703000699
	=8301 32613504480305699 ... )58161 ++++++++13
12162/10334/8014 kHz, 10-12, 1015/1025/1035 UTC	=7881 87870841106790479 ... )74064 3409900000+++++186
5782/4575/3861 kHz, 10-12, 2000/2010/2020 UTC	)5761 00000+++++++162
12162/10334/8014 kHz, 11-12, 1015/1025/1035 UTC	)5761 00000+++++++162
20560/18192/16105 kHz, 12-12, 1300/1310/1320 UTC	)5761 00000+++++++162
8129/6822/4469 kHz, 12-12, 1810/1820/1830 UTC	RYRYRY )5761 00000+++++++162
12162/10334/8014 kHz, 13-12, 1015/1025/1035 UTC	=8541 76694740581524083 ... )6941483544100000+++++213
12162/10334/8014 kHz, 16-12, 1015/1025/1035 UTC	=8701 70151632565944271 ... )57614700000+++++++131
12162/10334/8014 kHz, 17-12, 1015/1025/1035 UTC	=8381 41030353890790239 ... )57667 00000+++++++166
5782/4575/3861 kHz, 17-12, 2000/2010/2020 UTC	)5761 00000+++++++162
12162/10334/8014 kHz, 18-12, 1015/1025/1035 UTC	)5761 00000+++++++162
20560/18192/16105 kHz, 19-12, 1300/1310/1320 UTC	)5761 00000+++++++162
12162/10334/8014 kHz, 21-12, 1015/1025/1035 UTC	=8431 85964379505350260 ... )581142+++++++125
10334/8014 kHz, 23-12, 1025/1035 UTC	=8931 14751595256955837 ... )581144+++++++91
12162/10334/8014 kHz, 25-12, 1015/1025/1035 UTC	=8381 41030353890790239 ... )57667 00000+++++++166
20560/18192/16105 kHz, 26-12, 1300/1310/1320 UTC	)5761 00000+++++++162
8129/6822/4469 kHz, 26-12, 1810/1820/1830 UTC	)5761 00000+++++++162
12162/10334/8014 kHz, 28-12, 1015/1025/1035 UTC	=8021 39916741536497668 ... )57614700000+++++++131
12162/10334/8014 kHz, 29-12, 1015/1025/1035 UTC	2 msgs =8241 35193721600853772 ... )58156 ++++++++93
12162/10334/8014 kHz, 30-12, 1015/1025/1035 UTC	(2181110009777436712905004439
	=8381 77607177255243385 ... )7491485044100000+++++171
12162/10334/8014 kHz, 31-12, 1015/1025/1035 UTC	=8401 924416595611395146 ... )58156 ++++++++93 (2 messages)

**12162/10334/8014 kHz, 01-12,  
1015/1025/1035 UTC**

=8041 8161108742269652  
=8542 39348747357960188  
=8093 714323236892359140  
=8564 25959724167339842  
=8005 287601759945900128  
=8776 52687618015202642  
=8287 95299417869658498  
=8288 664464012380583145  
=8259 19352010200096946  
=80510 46076600700556972  
=81211 01818075578716040  
=80312 069257554397926162  
=81213 827747911883584132  
=79814 558017209783584116  
=83815 857151810705068156  
=86116 71565208476785472  
=78017 13998659228480652

=80618 667719549864523140  
=75919 160252749590157149  
=77120 323972506804987165  
=78421 58415748472896487  
=86922 24063000000000069  
=72023 00000000000000109  
=81224 000009574673441104  
=84025 126621416032057128  
=84626 15694402009719995  
=81027 9386540898979141  
=89228 451529400810197174  
=84529 854663242539994200  
=84930 654937502476715134  
=90931 99737344596513680  
=82832 239247008613122152  
=89433 69913893972678914  
=85934 502265804816480125  
=83735 609424819951418118  
=84036 382643154644688148

=79337 265205351888859119  
=84238 481038592352703110  
=79539 48254255989193359  
=88440 55029192286692839  
=79941 796414248119296104  
=82142 72637915680175441  
=86343 274263997701068110  
=83144 100435671145037100  
=78745 166922561050974111  
=85646 444978469869075108  
=86147 349764544131893152  
=83548 06373729331668334  
=87449 15986693011502063  
=84850 40026756657460676  
=75451 36547249099755138  
=88952 275439950234864104  
=75653 42248208419114679  
=84454 9922896648250992  
)57655 00000+++++++151

The messages in 5-figure format

81611 08742 26965 39348 74735 79601 71432 32368 92359 25959  
72416 73398 28760 17599 45900 52687 61801 52026 95299 41786  
96584 66446 40123 80583 19352 01020 00969 46076 60070 05569  
01818 07557 87160 06925 75543 97926 82774 79118 83584 55801  
72097 83584 85715 18107 05068 71565 20847 67854 13998 65922  
84806 66771 95498 64523 16025 27495 90157 32397 25068 04987  
58415 74847 28964 24063 00000

95746 73441 12662 14160 32057 15694 40200 97199 93865 40898  
97914 45152 94008 10197 85466 32425 39994 65493 75024 76715  
99737 34459 65136 23924 70086 13122 69913 89397 26789 50226  
58048 16480 60942 48199 51418 38264 31546 44688 26520 53518  
88859 48103 85923 52703 48254 25598 91933 55029 19228 66928  
79641 42481 19296 72637 91568 01754 27426 39977 01068 10043  
56711 45037 16692 25610 50974 44497 84698 69075 34976 45441  
31893 06373 72933 16683 15986 69301 15020 40026 75665 74606  
36547 24909 97551 27543 99502 34864 42248 20841 91146 99228  
96648 25099 00000



Russian M-125 (Fialka or ФИАЛКА) Cipher Device

Source:

<http://www.glennsmuseum.com/encryption/encryption.html>

A very nice website about all kinds of old computer stuff and encryption devices.

**4027/5324/7682 kHz, 01-12,  
2000/2010/2020 UTC**

=8321 75488015891171573  
=8772 90984883482290790  
=8373 622921596560459107  
=7684 046144570599563120  
=8075 564810132354559126  
=8146 226367613580872144  
=8647 488118101594729112  
=8218 754754203482550115  
=8119 28876497481116119  
=82810 87445376522644590  
=80511 15130793289364639  
=84112 52961334726726682  
=81913 85752041756376978  
=84614 96957423542487354  
=83515 767325255305517100  
=82916 92304919423468936  
=85217 86065563076238390  
=87118 54652689651667135  
=85719 19555659567546378  
=88220 74543076231434139  
=82421 05216422061095710  
=83022 721471309554602106  
=82623 210702971953103120  
=90324 88722104023704166  
=79225 45470302495501794  
=81126 10394923917693194  
=81627 88823208504547237  
=80128 354603238743391129  
=81529 661935296097732105  
=86330 719810912401701146  
=76831 668013638680917142  
=83232 159495190145218159  
=88233 789959454253053159  
=81934 62045375510457943  
=80435 083705993691754101  
=80636 989343299725369122  
=75537 65540259918275569  
=82738 17830885931555784  
=85439 17302332214966580  
=80240 480458782607283105  
=82241 690715754724964108  
=81642 19087819610822644  
=87043 90243914874117269  
=83044 752760757732509146  
=80445 917583600511705122  
=86446 65439202133410789

=85247 782521800729713125  
=84448 88496622911948757  
=81749 14873558739245673  
=88850 614678525867841112  
=83351 56539694989160760  
=85852 172635932702225127  
=89453 38170785670449986  
=84154 714945204458699104  
=78955 20243532690232644  
=80756 237526322565537104  
=84957 183768845278107121  
=83358 767339627787933173  
=86059 09466597951293937  
=80760 50825178147051197  
=82561 48048177742917096  
=85462 30975291035119978  
=81463 277805498866167131  
=78864 37413986169704676  
=82365 09729414905916192  
=82966 541675183174890179  
=90467 962992802932917103  
=80368 027680942254237115  
=83869 602724182714682125  
=78670 147604201793596123  
=83571 47877257305421130  
=80272 32341611393292784  
=78873 950039191867477146  
=82774 336552154361584126  
=88375 23800661102066263  
=85976 85767340339251293  
=80177 195614092350484107  
=80878 550607688771804102  
=88379 864849501517591151  
=78480 210344458626654118  
=85881 72295677877234679  
=81682 61323892989524750  
=78783 54101240516107879  
=82784 7003761474552793  
=86585 8312863952029060  
=78486 23936162267053136  
=82187 59016417993695746  
=80788 313401461240107127  
=85389 594564202120904103  
=87390 908092307729870121  
=75391 652453513690101159  
=83292 38868288325723941  
=80693 60043289559861897  
=78494 129860965868992105

=84195 008397034745913141  
=83796 516812012160729147  
=78497 15389443373654364  
=86098 004144868266977134  
=80299 75162245908041079  
=81010099273054197692599  
=87310118199882687442476  
=80510281622340498948726  
=84810351849847900307973  
=86010402516428623975068  
=75210510819319335958393  
=875106051360838794179139  
=80510702600058244127693  
=816108773627341892373123  
=798109067425271317368107  
=820110825169878600749101  
=796111554467830309071152  
=800112643572634392028157  
=823113906630045938338136  
=784114622141896158511122  
=89211590985294366543797  
=808116154834543500679137  
=768117063461096960583101  
=831118876926423515959166  
=829119712037694984003126  
=875120836098034471316153  
=825121651883209900677103  
=822122608743334930297132  
=866123775068703508020157  
=81512442641472815630497  
=81712537605681785190580  
=852126595674011001308127  
=87212706681710026359652  
=851128297719421501979131  
=88912913533862111454683  
=830130415957644601365122  
=831131703024619074912149  
=837132328391786288723148  
=823133689790478857278106  
=769134039529222997798212  
=831135450892151888132103  
=846136424649857088197151  
=905137565932524344991119  
=857138410061304405737120  
=806139008469764271086106  
=827140285827010981639148  
=80114108839672104542291  
)57614200000+++++++132

## The message in 5-figure format

75488 01589 11715 90984 88348 22907 62292 15965 60459 04614  
45705 99563 56481 01323 54559 22636 76135 80872 48811 81015  
94729 75475 42034 82550 28876 49748 11161 87445 37652 26445  
15130 79328 93646 52961 33472 67266 85752 04175 63769 96957  
42354 24873 76732 52553 05517 92304 91942 34689 86065 56307  
62383 54652 68965 16671 19555 65956 75463 74543 07623 14341  
05216 42206 10957 72147 13095 54602 21070 29719 53103 88722  
10402 37041 45470 30249 55017 10394 92391 76931 88823 20850  
45472 35460 32387 43391 66193 52960 97732 71981 09124 01701  
66801 36386 80917 15949 51901 45218 78995 94542 53053 62045  
37551 04579 08370 59936 91754 98934 32997 25369 65540 25991  
82755 17830 88593 15557 17302 33221 49665 48045 87826 07283  
69071 57547 24964 19087 81961 08226 90243 91487 41172 75276  
07577 32509 91758 36005 11705 65439 20213 34107 78252 18007  
29713 88496 62291 19487 14873 55873 92456 61467 85258 67841  
56539 69498 91607 17263 59327 02225 38170 78567 04499 71494  
52044 58699 20243 53269 02326 23752 63225 65537 18376 88452  
78107 76733 96277 87933 09466 59795 12939 50825 17814 70511  
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**12162/10334/8014 kHz, 02-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 03-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 10-12,  
1015/1025/1035 UTC**

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The messages in 5-figure format. Note the header which is identical to the headers of the old RTTY transmissions

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**12162/10334/8014 kHz, 13-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 16-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 17-12,  
1015/1025/1035 UTC**

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The messages in 5-figure format

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**12162/10334/8014 kHz, 21-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 22-12,  
1015/1025/1035 UTC**

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The messages in 5-figure format

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39211 47225 92401 09537 05233 27480 50934 21223 22349 24369  
81278 49215 77542 45929 64216 75420 45359 64964 39131 48596  
03747 16990 87481 70432 08194 89676 73776 69223 03859 02247  
36276 22078 80369 98229 44573 11608 98994 00059 66264 28015  
46860 98898 09887 52537 97901 78177 36316 42077 00000

77459 05873 43404 92790 09723 76135 00774 30902 61586 66888  
36226 39172 70773 15982 17316 21856 65961 78792 55858 87705  
14322 83241 26791 63048 80668 94293 34405 41683 70690 98863  
80627 45030 25451 47067 15036 90973 59345 10760 71304 94831  
58704 45302 19760 50893 83227 65476 90740 67957 37439 71511  
48446 57318 04345 86131 19952 96624 58491 88586 09102 18057  
00602 56589 49942 94260 80983 52099 79394 20465 03891 11894  
33858 16240 30034 28859 99422 95310 19424 34945 70383 76881  
81722 21715 95741 36852 63211 59432 18387 22684 29295 00615  
36636 43091 00000

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**12162/10334/8014 kHz, 23-12, 1015/1025/1035 UTC**

The message in 5-figure format

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11656 25943 20409 81448 22974 01253 15834 79420 49399 77811  
28895 36586 97181 39679 18928 19823 26663 93324 17085 53900  
81786 33929 51590 16544 09159 59443 11777 27342 46349 30832  
43075 91442 84114 01954 90142 83972 32238 67503 30334 86111  
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31912 57849 32771 05929 51416 37043 79583 06619 50022 15903  
53327 24044 37994 46605 94164 30374 07990 26499 34120 87170  
50021 91649 58573 21602 76273 59703 14335 35569 10486 95512  
31490 83676 21554 97938 51203 80991 06078 31296 76659 26523  
49506 49855 89344 53361 20590 88853 97843 41418 78823 20446  
11344 53699 99560 98035 55037 82049 46493 37417 69596 13309  
46179 08182 61929 51816 44316 33802 99385 59198 48429 23861  
64610 97384 86684 86830 13226 85770 37491 96866 01537 08495  
09602 13043 76441 32741 77384 74456 44738 24015 00958 19661  
64010 69328 85874 03845 22284 44242 62050 12205 98643 84677  
86612 92947 21989 49463 00364 58358 70124 84539 92542 27370  
76374 24755 53584 08084 35894 94204 20541 43653 28885 91038  
44880 69996 02887 67680 37322 58761 81341 42389 69423 43975  
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47402 26153 38801 09913 96841 73429 16497 09563 73890 67429  
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93912 04002 37251 61776 22106 68842 35798 01134 26509 01508  
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90107 46652 61911 57249 36012 99502 86828 05389 95544 96691  
97274 14390 95808 31238 20814 09466 74762 27383 25897 44059  
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49893 95660 29676 21251 89770 26332 07709 76109 94077 30660  
06885 77533 18285 83922 68213 28700 43881 96565 33944 65913  
52756 54873 94643 12800 91918 13291 94596 26002 95726 74356  
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70153 70088 39108 13282 66269 50533 37045 63463 29339 75017  
46855 57955 71491 46648 71354 22241 52153 97585 21516 37038  
79185 63500 32503 37219 97233 94064 59878 11607 80473 85417  
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20389 98323 68512 16095 32530 09022 96464 50732 92891 10669  
23720 81234 12134 18552 11654 14156 96440 05664 10545 02534  
94171 04692 13308 33281 26591 30430 11275 24839 69870 58533  
31707 33522 80544 21551 61747 91979 81611 08192 88468 28241  
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**12162/10334/8014 kHz, 24-12,  
1015/1025/1035 UTC**

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The messages in 5-figure format

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47008 35495 70332 57920 44818 58893 61426 65151 27721 09781  
67321 61872 15665 48827 55686 20428 47475 79889 55317 61585  
75208 62966 66098 59154 14867 87808 60478 68911 87983 50346  
34395 26957 32168 99144 08288 98563 64085 44067 39161 82195  
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72968 45081 00000

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16552 16556 53874 24428 09434 82785 51821 36744 26779 62698  
89103 70636 28093 00679 96900 03272 80522 14075 45021 74102  
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**12162/10334/8014 kHz, 28-12,  
1015/1025/1035 UTC**

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**12162/10334/8014 kHz, 29-12,  
1015/1025/1035 UTC**

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The messages in 5-figure format

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12181 87763 22187 62228 53934 54364 13014 48728 64581 79875  
09662 16021 14184 57943 72045 97054 09357 05988 84018 69861  
09079 38024 86228 65580 83575 52809 85631 59787 89703 04523  
77604 26808 61274 48141 41595 61709 37763 76713 96243 99656  
79826 92716 24911 87312 45079 80684 07559 85987 22559 73286  
19914 48071 00000

48829 70276 82990 91836 76928 04089 60340 28519 52497 55107  
43300 92726 70851 84934 40061 01259 70270 31342 46282 41479  
07854 56256 28807 08607 39756 15729 19230 92337 48018 62807  
72026 86207 81159 19260 66909 18155 00728 77082 60121 25713  
50998 15727 14332 24261 93997 45996 61843 41785 77057 16525  
80777 18580 25064 43811 88944 95327 74607 51707 85068 37995  
92216 31324 92072 72984 43858 57290 82093 30971 07891 21286  
87924 22880 48674 68808 30578 96415 92997 50089 17639 46611  
76535 21119 92112 49083 00000

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**12162/10334/8014 kHz, 30-12,  
1015/1025/1035 UTC**

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=85171 039786217417505104  
=78772 35853607990022643  
=89073 391110872089847190  
=90374 71680406270344197  
=78575 28753406399732164  
=78676 45162225600898103  
=85577 03643084472977178  
=86678 575119977743809208  
=83079 26795775894439712  
=80180 352036110315025155  
=82181 570320565749668218  
=86982 388297852013238119  
=82883 272341977322951184  
=85284 04539824945501782  
=85685 19553178654280673  
=86186 354126796253329147  
=82287 93365851645530782  
=78788 520134180828557110  
=80489 08543514106414698  
=83990 634048048509318111  
=83991 929984593392964110  
=81792 133793403516776145  
=80493 855511845421588119  
=82794 227714328479009182  
=84395 49361142420184099  
=82096 68722371682245966  
=80397 535840446419648111  
=81498 469630293116886161  
=87399 678910743844468156

=776100347537991039822102  
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=82710241350738045744872  
=861103592149419767003123  
=81310481028290072244081  
=77110503710376395547581  
=91110661987881594686946  
=84110703626482032380239  
=816108341511652450881111  
=863109069539274893947133  
=785110112783068696998104  
=799111273976088297432156  
=877112590295237526604122  
=783113636974610203905121  
=828114520876534400804157  
=847115861978981296892160  
=863116312459242643701147  
=80611743244634753552580  
=81711866879872977328668  
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=894120395995746515019115  
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=830122134395775806965151  
=780123165523483965854152  
=846124828952336854250116  
=812535371054793381428113  
=85612653734045595595789  
=796127783653764295892121  
=85012850023277774053681  
=875129918094807866531116  
=893130574869624887748158  
=812131474925141191840121  
=80713297408635791715787  
=871133790688569864120185  
=837134070092254966690170  
=845135494284730552880128  
=89113662882545310086396  
=791137974955321858007122  
=836138548823896258307118  
=903139768513903524145149  
=862140800463331203412182  
=82614172709378180464459  
=877142110185835368457121  
=857143917032451561252152  
=838144821836733591880121  
=870145151169166690470158  
=81614660685973235643171  
=78714796899756683555632  
)7491485044100000+++++171



The message in 5-figure format. Note the header.

11100 09777 43671 29050 04439  
77607 17725 52433 47208 05301 32117 49242 81554 58909 61402  
61159 64979 77161 67944 18630 17847 77564 92778 69292 65628  
98884 61736 77337 79452 22620 86586 97966 92139 71924 53380  
87884 94407 11404 15200 37761 40948 96228 31476 37605 21051  
44010 21091 10993 73461 27853 21421 79070 50173 14048 70540  
40283 58829 92829 54745 76772 38420 75629 88601 23356 47974  
57285 19701 60054 72930 66612 75309 14091 78858 53808 93095  
82288 67246 88094 03139 09834 13012 64065 53378 86305 88451  
40152 95720 44947 03300 57667 74974 76076 15579 13838 87800  
90615 92953 87290 03876 94638 29250 39415 66448 60902 45839  
40038 14473 08281 32580 90857 93520 25051 07984 45062 47641  
96965 03324 46587 09371 26043 00344 37429 30077 51018 77274  
06470 17813 05399 42835 78236 74886 74047 62912 65051 52326  
34239 09603 30981 63417 92130 87302 41056 23523 50579 15543  
94172 08348 69241 73243 63126 47856 02896 34082 90208 98019  
28930 47666 11815 57580 99920 46192 10484 22028 82252 81281  
17826 91963 66704 20673 16761 78052 61951 59479 16510 69745  
06914 25669 98786 59949 62884 84478 58604 42854 71391 71444  
88161 27081 88704 08722 77223 31360 32578 44082 84539 54906  
04789 99527 11107 39693 67466 12388 01565 66813 97419 34986  
84102 54099 41112 61149 10356 47209 39213 31108 40919 21353  
03978 62174 17505 35853 60799 00226 39111 08720 89847 71680  
40627 03441 28753 40639 97321 45162 22256 00898 03643 08447  
29771 57511 99777 43809 26795 77589 44397 35203 61103 15025  
57032 05657 49668 38829 78520 13238 27234 19773 22951 04539  
82494 55017 19553 17865 42806 35412 67962 53329 93365 85164  
55307 52013 41808 28557 08543 51410 64146 63404 80485 09318  
92998 45933 92964 13379 34035 16776 85551 18454 21588 22771  
43284 79009 49361 14242 01840 68722 37168 22459 53584 04464  
19648 46963 02931 16886 67891 07438 44468 34753 79910 39822  
62263 75255 00901 41350 73804 57448 59214 94197 67003 81028  
29007 22440 03710 37639 55475 61987 88159 46869 03626 48203  
23802 34151 16524 50881 06953 92748 93947 11278 30686 96998  
27397 60882 97432 59029 52375 26604 63697 46102 03905 52087  
65344 00804 86197 89812 96892 31245 92426 43701 43244 63475  
35525 66879 87297 73286 75970 44318 41871 39599 57465 15019  
79390 86621 86475 13439 57758 06965 16552 34839 65854 82895  
23368 54250 37054 79338 14281 53734 04559 55957 78365 37642  
95892 50023 27777 40536 91809 48078 66531 57486 96248 87748  
47492 51411 91840 97408 63579 17157 79068 85698 64120 07009  
22549 66690 49428 47305 52880 62882 54531 00863 97495 53218  
58007 54882 38962 58307 76851 39035 24145 80046 33312 03412  
72709 37818 04644 11018 58353 68457 91703 24515 61252 82183  
67335 91880 15116 91666 90470 60685 97323 56431 96899 75668  
35556 50441 00000

---

**12162/10334/8014 kHz, 31-12,  
1015/1025/1035 UTC**

=8401 924416595611395146  
=8542 93444307554140380  
=8373 84094146522718679  
=9084 84798536705745056  
=7755 75456958874947966  
=8216 968316651984379111  
=8617 69859483807279840  
=8698 59938757945537329  
=8389 774614726110077145  
=76810 033314088987192163  
=86111 466418543421546109  
=86712 09820997616726978  
=87013 93426904674780142  
=87414 243182727924551141  
=84815 51199506462778037  
=86016 822026938262215140  
=81717 43854286270629540  
=83318 43264943292112585

=83319 392200919476108148  
=86120 186961059984393105  
=82321 470486519287521146  
=84922 18444007353194081  
=88523 18578891417534080  
=83524 307654276765771108  
=84725 637463337930139152  
=84326 310711712958037115  
=84327 58861853335918482  
=86528 09428584048106241  
=88829 53188827177352334  
=85130 510870000000000129  
=78731 274405699427734108  
=84232 60555666996464788  
=82133 00816902008679361  
=87534 77884979106567159  
=89435 91370231176696728  
=79836 81176988130395932  
=81837 59523367629614480  
=80838 644761570907080176

=83239 01613958946653694  
=85940 965785941803956176  
=78641 394101081714997121  
=80542 79095778019856485  
=87843 44312365211015141  
=81144 444063558619277116  
=85945 34992165074691399  
=84246 78737900929925377  
=83747 88181793074677729  
=84548 654360076489920159  
=84749 351456767433380152  
=84450 57288792535377078  
=83051 37607771552216188  
=85852 356663144205894187  
=82353 52628667150437739  
=87154 79607694210693289  
=75255 624105207300000131  
)58156 ++++++++93

The messages in 5-figure format

92441 65956 11395 93444 30755 41403 84094 14652 27186 84798  
53670 57450 75456 95887 49479 96831 66519 84379 69859 48380  
72798 59938 75794 55373 77461 47261 10077 03331 40889 87192  
46641 85434 21546 09820 99761 67269 93426 90467 47801 24318  
27279 24551 51199 50646 27780 82202 69382 62215 43854 28627  
06295 43264 94329 21125 39220 09194 76108 18696 10599 84393  
47048 65192 87521 18444 00735 31940 18788 91417 53408 30765  
42767 65771 63746 33379 30139 31071 17129 58037 58861 85333  
59184 09428 58404 81062 53188 82717 73523  
51087 00000

27440 56994 27734 60555 66699 64647 00816 90200 86793 77884  
97910 65671 91370 23117 66967 81176 98813 03959 59523 36762  
96144 64476 15709 07080 01613 95894 66536 96578 59418 03956  
39410 10817 14997 79095 77801 98564 44312 36652 11015 44406  
46777 65436 00764 89920 35145 67674 33380 57288 79253 53770  
35586 19277 34992 16507 46913 78737 90092 99253 88181 79307  
37607 77155 22161 35666 31442 05894 52628 66715 04377 79607  
69421 06932 62410 00000

M42d – FSK 200/1000. Frequencies mentioned are in USB = center frequency -2 kHz

Link 00000

**5913/7992 kHz, 16-12, 1150/1200 UTC and 10687//17478 kHz, 16-12, 1210 UTC. 17478 kHz was an error**

Link ID 00000, Date 16th, Serial #222

Link 16404 / 16405

**20892/18721/16349 kHz, 09-12, 0900/0910/0920 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 16404 : 9th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4

46740 00000 00000 00736 59836 35283 00893 14105

**20892/18721/16349 kHz, 23-12/24-12, 0900/0910/0920 UTC**

Block No 0 : Total Message Size 23 blocks : This transmission contains one message.

Block No 1 : Link ID 16404 : 22nd of month : Msg Number 235 : Msg Type 07145 : Group Count (?) 144  
22464 21587 34212 34686 55396 03323 05135 17454

Link 20492

**20961/18617/16346 kHz, 09-12, 1015/1025/1035 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20492 : 9th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
30356 00000 00000 04034 34753 35609 00893 25709

**20961/18617/16346 kHz, 23-12, 1015/1025/1035 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20492 : 23rd of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
30356 00000 00000 03133 34753 36269 00893 11744

Link 20501

**9226/7843/5267 kHz, 01-12, 1650/1700/1710 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 1st of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
63124 00000 00000 03612 16418 34394 00893 18125

**9226/7843/5267 kHz, 08-12, 1650/1700/1710 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 8th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
39180 00000 00000 02676 12857 36246 00893 35512

**11082/9344/7827 kHz, 13-12, 1530/1540/1550 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 13th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
63124 00000 00000 01219 16418 34400 00893 43075

**9226/7843/5267 kHz, 15-12, 1650/1700/1710 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 15th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
63124 00000 00000 02151 16418 32930 00893 57565

**11082/9344/7827 kHz, 20-12, 1530/1540/1550 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 20th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
34156 00000 00000 00154 12857 35801 00893 56994'

**5267 kHz, 22-12, 1710 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 22nd of month : Msg Number 147 : Msg Type 07145 : Group Count (?) 4  
39392 00000 00000 01073 21447 33469 00893 43548

**11082/9344/7827 kHz, 27-12, 1530/1540/1550 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 27th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
03949 00000 00000 00347 21447 34311 00893 54550

**9226/7843/5267 kHz, 29-12, 1650/1700/1710 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 20501 : 29th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
41905 00000 00000 00003 12857 34050 00893 53841

Link 32799

**17444/15872/13521 kHz, 01-12/08-12, 1400/1410/1420 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 32799 : 1st of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
13076 00000 00000 03518 19279 35548 00893 03392

**17444/15872/13521 kHz, 15-12, 1400/1410/1420 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 32799 : 15th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
13972 00000 00000 03019 19279 35020 00893 01903

**17532/15631/13517 kHz, 20-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 54 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 17th of month : Msg Number 085 : Msg Type 07145 : Group Count (?) 110  
10476 13063 47600 04782 34728 07952 46909 37282

**17444/15872/13521 kHz, 22-12, 1400/1410/1420 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 32799 : 22nd of month : Msg Number 100 : Msg Type 07145 : Group Count (?) 4  
30052 00000 00000 03138 26870 02296 02047 31724

**17444/15872/13521 kHz, 29-12, 1400/1410/1420 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 32799 : 29th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
42037 00000 00000 03148 26836 34149 00893 42733

Link 32821

**18481 kHz, 19-12, 1510 UTC**

Null message on Link ID 32821

**20646/18481/16194 kHz, 26-12, 1500/1510/1520 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 32821 : 26th of month : Msg Number 057 : Msg Type 07145 : Group Count (?) 4  
39181 00000 00000 01430 13740 33766 00893 40889

Link 36882

**17532/15631/13517 kHz, 05-12/06-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 39 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 4th of month : Msg Number 080 : Msg Type 07145 : Group Count (?) 254  
60684 12583 28987 06617 37098 00312 41030 25693

**17532/15631/13517 kHz, 12-12/06-12/13-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 18 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 11th of month : Msg Number 082 : Msg Type 07145 : Group Count (?) 102  
06888 13703 15803 05308 31234 35685 43292 64708

**17532/15631/13517 kHz, 19-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 54 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 17th of month : Msg Number 085 : Msg Type 07145 : Group Count (?) 110  
10476 13063 47600 04782 34728 07952 46909 37282

**17532/15631/13517 kHz, 26-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 25th of month : Msg Number 087 : Msg Type 07145 : Group Count (?) 242  
58308 15943 23058 07829 31234 35663 19714 08438

**17532/15631/13517 kHz, 27-12, 1100/1110/1120 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 36882 : 25th of month : Msg Number 087 : Msg Type 07145 : Group Count (?) 242  
58308 15943 23058 07829 31234 35663 19714 08438

Link 40988
------------

**8046/6787/5864 kHz, 01-12, 2300/2310/2320 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 40988 : 1st of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
62176 00000 00000 01385 22585 34130 00893 33126

**4036 kHz, 08-12, 2320 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 40988 : 8th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
55564 00000 00000 00036 00624 35650 00893 42547

**4036 kHz, 15-12, 2320 UTC**

Block No 0 : Total Message Size 45 blocks : This transmission contains one message.

Block No 1 : Link ID 40988 : 15th of month : Msg Number 157 : Msg Type 07145 : Group Count (?) 47  
51052 20500 39180 20908 00624 39462 34925 27875

**6812 kHz, 18-12, 0620 UTC**

Block No 0 : Total Message Size 45 blocks : This transmission contains one message.

Block No 1 : Link ID 40988 : 15th of month : Msg Number 157 : Msg Type 07145 : Group Count (?) 47  
51052 20500 39180 20908 00624 39462 34925 27875

**8046/6787/5864 kHz, 22-12, 2300/2310/2320 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 40988 : 22nd of month : Msg Number 160 : Msg Type 07145 : Group Count (?) 4  
65332 00000 00000 01149 00624 01987 00893 42770

Link 45057
------------

**20949/18641/16312 kHz, 13-12, 1000/1010/1020 UTC**

Block No 0 : Total Message Size 14 blocks : This transmission contains one message.

Block No 1 : Link ID 45057 : 11th of month : Msg Number 195 : Msg Type 07145 : Group Count (?) 79  
59676 03168 43558 18085 38644 02831 18985 14064

**20949/18641/16312 kHz, 26-12, 1000/1010/1020 UTC**

Block No 0 : Total Message Size 14 blocks : This transmission contains one message.

Block No 1 : Link ID 45057 : 11th of month : Msg Number 195 : Msg Type 07145 : Group Count (?) 79  
59676 03168 43558 18085 38644 02831 18985 14064

Link 45075

**20836/18292/16311 kHz, 16-12, 0800/0810/0820 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45075 : 16th of month : Msg Number 057 : Msg Type 07145 : Group Count (?) 4  
09996 00000 00000 00626 36033 36610 00893 31964

**20836/18292/16311 kHz, 23-12, 0800/0810/0820 UTC**

Block No 0 : Total Message Size 3 blocks : This transmission contains 4 messages.

Block No 1 : Link ID 45075 : 23rd of month : Msg Number 137 : Msg Type 07145 : Group Count (?) 4  
63388 00000 00000 02225 29748 34054 00893 00062

**20836/18292/16311 kHz, 30-12, 0800/0810/0820 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45075 : 30th of month : Msg Number 117 : Msg Type 07145 : Group Count (?) 4  
64937 00000 00000 00364 09055 35569 00893 13595

Link 45079

**8054/6796/4538 kHz, 21-12, 0500/0510/0520 UTC**

Russian diplo/intel. Msg 020 on link 45079, Date 18th

Link 45114 / 45115

**18189/16125/14367 kHz, 13-12, 0900/0910/0920 UTC**

Block No 0 : Total Message Size 54 blocks : This transmission contains one message.

Block No 1 : Link ID 45114 : 11th of month : Msg Number 055 : Msg Type 07145 : Group Count (?) 104  
26872 03702 59930 39734 53087 07978 11846 60581

**18189/16125/14367 kHz, 26-12, 0900/0910/0920 UTC**

Block No 0 : Total Message Size 13 blocks : This transmission contains one message.

Block No 1 : Link ID 45114 : 25th of month : Msg Number 057 : Msg Type 07145 : Group Count (?) 72  
50344 05942 52240 38515 53087 36415 51558 57176

**18189/16125/14367 kHz, 27-12, 0900/0910/0920 UTC**

Block No 0 : Total Message Size 13 blocks : This transmission contains one message.

Block No 1 : Link ID 45114 : 25th of month : Msg Number 057 : Msg Type 07145 : Group Count (?) 72  
50344 05942 52240 38515 53087 36415 51558 57176

Link 45136 / 45137

**11044/9063/7477 kHz, 01-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 30th of month : Msg Number 195 : Msg Type 07145 : Group Count (?) 169  
46969 04726 16514 33232 58024 02749 06701 56884

**9176/7622 kHz, 01-12, 1200/1210 UTC**

Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 30th of month : Msg Number 195 : Msg Type 07145 : Group Count (?) 169  
46969 04726 16514 33232 58024 02749 06701 56884

**11044/9063/7477 kHz, 02-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 36 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 1st of month : Msg Number 200 : Msg Type 07145 : Group Count (?) 235  
29164 62727 12399 34064 09959 00502 35915 65448

**9176/7622 kHz, 02-12, 1200/1210 UTC**

Block No 0 : Total Message Size 36 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 1st of month : Msg Number 200 : Msg Type 07145 : Group Count (?) 235  
29164 62727 12399 34064 09959 00502 35915 65448

**11044/9063/7477 kHz, 03-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 2nd of month : Msg Number 202 : Msg Type 07145 : Group Count (?) 173  
06888 18712 60863 27439 58024 33632 09655 30291

**9176/7622/5787 kHz, 03-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 2nd of month : Msg Number 202 : Msg Type 07145 : Group Count (?) 173  
06888 18712 60863 27439 58024 33632 09655 30291

**11044/9063/7477 kHz, 04-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 4th of month : Msg Number 035 : Msg Type 07145 : Group Count (?) 4  
00588 00000 00000 02846 01146 00342 00893 64495

**11044/9063/7477 kHz, 06-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 42 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 4th of month : Msg Number 207 : Msg Type 07145 : Group Count (?) 23  
06012 06132 15977 23392 58024 37098 42967 38892

**11044/9063/7477 kHz, 07-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 42 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 4th of month : Msg Number 207 : Msg Type 07145 : Group Count (?) 23  
06012 06132 15977 23392 58024 37098 42967 38892

**9176/7622/5787 kHz, 07-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 42 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 4th of month : Msg Number 207 : Msg Type 07145 : Group Count (?) 23  
06012 06132 15977 23392 58024 37098 42967 38892

**11044/9063/7477 kHz, 08-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 60 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 7th of month : Msg Number 210 : Msg Type 07145 : Group Count (?) 165  
23996 45218 30454 07000 55182 00853 54259 20609

**9176/7622/5787 kHz, 08-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 60 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 7th of month : Msg Number 210 : Msg Type 07145 : Group Count (?) 165  
23996 45218 30454 07000 55182 00853 54259 20609

**11044/9063/7477 kHz, 09-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 8th of month : Msg Number 215 : Msg Type 07145 : Group Count (?) 245  
57836 05720 12540 25636 65099 01334 37278 42802

**9176/7622/5787 kHz, 09-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 8th of month : Msg Number 215 : Msg Type 07145 : Group Count (?) 245  
57836 05720 12540 25636 65099 01334 37278 42802

**11044/9063/7477 kHz, 10-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 67 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 9th of month : Msg Number 217 : Msg Type 07145 : Group Count (?) 63  
45536 30337 38067 23154 01146 37934 40976 20766

**9176/7622/5787 kHz, 10-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 67 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 9th of month : Msg Number 217 : Msg Type 07145 : Group Count (?) 63  
45536 30337 38067 23154 01146 37934 40976 20766

**11044/9063/7477 kHz, 11-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 11th of month : Msg Number 142 : Msg Type 07145 : Group Count (?) 4  
07592 00000 00000 02725 58024 34757 00893 05660

**11044/9063/7477 kHz, 14-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 43 blocks : This transmission contains 0 messages.

Block No 1 : Link ID 45136 : 11th of month : Msg Number 222 : Msg Type 07145 : Group Count (?) 35  
25856 13433 54508 04935 65099 40722 47164 06530

**11044/9063/7477 kHz, 15-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 67 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 14th of month : Msg Number 225 : Msg Type 07145 : Group Count (?) 225  
26828 64309 41633 04087 55182 01105 22804 25113

**11044/9063/7477 kHz, 16-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 34 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 15th of month : Msg Number 230 : Msg Type 07145 : Group Count (?) 223  
27460 12504 07209 18824 65099 00441 30373 34031

**9176/7622/5787 kHz, 16-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 34 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 15th of month : Msg Number 230 : Msg Type 07145 : Group Count (?) 223  
27460 12504 07209 18824 65099 00441 30373 34031

**11044/9063/7477 kHz, 17-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 63 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 16th of month : Msg Number 232 : Msg Type 07145 : Group Count (?) 183  
61496 11945 35602 33346 58024 33524 10104 51347

**9176/7622/5787 kHz, 17-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 63 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 16th of month : Msg Number 232 : Msg Type 07145 : Group Count (?) 183  
61496 11945 35602 33346 58024 33524 10104 51347

**11044/9063/7477 kHz, 18-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 18th of month : Msg Number 017 : Msg Type 07145 : Group Count (?) 4  
22312 00000 00000 00652 09959 32848 00893 07712

**11044/9063/7477 kHz, 21-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 31 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 18th of month : Msg Number 237 : Msg Type 07145 : Group Count (?) 203  
28140 15609 54961 08181 58024 33662 06930 19501



**9176/7622/5787 kHz, 21-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 31 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 18th of month : Msg Number 237 : Msg Type 07145 : Group Count (?) 203  
28140 15609 54961 08181 58024 33662 06930 19501

**11044/9063/7477 kHz, 22-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 64 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 21st of month : Msg Number 240 : Msg Type 07145 : Group Count (?) 27  
26816 26450 12947 01697 07583 06047 54169 63133

**9176/7622/5787 kHz, 22-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 64 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 21st of month : Msg Number 240 : Msg Type 07145 : Group Count (?) 27  
26816 26450 12947 01697 07583 06047 54169 63133

**11044/9063/7477 kHz, 22-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 45 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 22nd of month : Msg Number 245 : Msg Type 07145 : Group Count (?) 45  
08904 01577 19568 14212 14055 07943 53149 12439

**9176/7622/5787 kHz, 23-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 45 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 22nd of month : Msg Number 245 : Msg Type 07145 : Group Count (?) 45  
08904 01577 19568 14212 14055 07943 53149 12439

**11044/9063/7477 kHz, 24-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 57 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 23rd of month : Msg Number 247 : Msg Type 07145 : Group Count (?) 173  
34680 59785 17704 19851 58024 36416 65203 20886

**9176/7622/5787 kHz, 24-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 57 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 23rd of month : Msg Number 247 : Msg Type 07145 : Group Count (?) 173  
34680 59785 17704 19851 58024 36416 65203 20886

**11044/9063/7477 kHz, 25-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 25th of month : Msg Number 032 : Msg Type 07145 : Group Count (?) 0  
35116 00000 00000 01614 55182 34773 00893 43556

**9176/7622/5787 kHz, 28-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 36 blocks : This transmission contains one message.

Block No 1 : Link ID 45137 : 25th of month : Msg Number 005 : Msg Type 07145 : Group Count (?) 233  
14044 40073 59973 34189 07583 01791 13840 20497

**11044/9063/7477 kHz, 29-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 58 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 28th of month : Msg Number 007 : Msg Type 07145 : Group Count (?) 189  
17933 23159 32059 09613 55182 35826 62195 39293

**9176/7622/5787 kHz, 29-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 58 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45136 : 28th of month : Msg Number 007 : Msg Type 07145 : Group Count (?) 189  
17933 23159 32059 09613 55182 35826 62195 39293

**11044/9063/7477 kHz, 30-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 29th of month : Msg Number 012 : Msg Type 07145 : Group Count (?) 243  
17977 54631 20608 18333 55182 34096 08928 27014

**9176/7622/5787 kHz, 30-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 37 blocks : This transmission contains one message.

Block No 1 : Link ID 45136 : 29th of month : Msg Number 012 : Msg Type 07145 : Group Count (?) 243  
17977 54631 20608 18333 55182 34096 08928 27014

**11044/9063/7477 kHz, 31-12, 0700/0710/0720 UTC**

Block No 0 : Total Message Size 55 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 30th of month : Msg Number 015 : Msg Type 07145 : Group Count (?) 179  
41457 09957 25327 27278 09959 01291 34249 13780

**9176/7622/5787 kHz, 31-12, 1200/1210/1220 UTC**

Block No 0 : Total Message Size 55 blocks : This transmission contains 2 messages.

Block No 1 : Link ID 45137 : 30th of month : Msg Number 015 : Msg Type 07145 : Group Count (?) 179  
41457 09957 25327 27278 09959 01291 34249 13780

Link 45141

**5212/4519 kHz, 16-12, 0240/0250 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 45141 : 16th of month : Msg Number 232 : Msg Type 07145 : Group Count (?) 4  
07120 00000 00000 01704 17656 33272 00893 07239

Link 49202

**20981/19137/17461 kHz, 09-12, 1000/1010/1020 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 49202 : 9th of month : Msg Number 110 : Msg Type 07145 : Group Count (?) 4  
40604 00000 00000 03003 28271 03925 00893 21295

**20981/19137/17461 kHz, 16-12, 1000/1010/1020 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 49202 : 16th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
22796 00000 00000 02981 28271 36012 00893 49649

**20981/19137/17461 kHz, 30-12, 1000/1010/1020 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 49202 : 30th of month : Msg Number 110 : Msg Type 07145 : Group Count (?) 4  
18213 00000 00000 00851 28271 03982 00893 28563

Link 49237

**12167/10362/8166 kHz, 17-12/18-12, 1330/1340/1350 UTC**

Block No 0 : Total Message Size 20 blocks : This transmission contains one message.

Block No 1 : Link ID 49237 : 15th of month : Msg Number 050 : Msg Type 07145 : Group Count (?) 122  
55760 52679 01274 16691 47143 03128 24646 06222

**12167/10362/8166 kHz, 31-12, 1330/1340/1350 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 49237 : 31st of month : Msg Number 067 : Msg Type 23529 : Group Count (?) 4  
61205 00000 00000 01331 54891 33609 00893 30478

Link 53277

**17576/15836 kHz, 02-12, 1230/1240 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 53277 : 2nd of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
34280 00000 00000 02446 15966 34757 00893 50954

**17576/15836/13885 kHz, 02-12, 1230/1240/1250 UTC**

Block No 0 : Total Message Size 4 blocks : This transmission contains one message.

Block No 1 : Link ID 53277 : 16th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4  
34156 00000 00000 02273 15966 35392 00893 58097

**Protocol description**

Daniel (Danix) sent me a description of the protocol used by M42d. Below are hexdumps of several transmissions. The original messages are binary, and baked directly into the signal. Preambles are included.

18189/16125/14367 kHz, 13-12, 0900/0910/0920 UTC

1be9 b03a 68f8 6e37 68f4  
ea1a 0e76 a715 b871 9b58 5a80 9307 3bfa 32a2 76c0  
1776 d6ce abf9 bcb0 f6bb 9eb2 ebae 075e e687 48f0  
6074 4885 2104 62f9 24c1 0e08 18c7 9d9e 6e14 f728  
3204 3bcf 71c2 35a2 9b6a 4192 8952 591f be8a db56  
a2e7 180f baf6 1097 aca3 5396 e67f a1b0 9806 fd00  
2d46 f790 1f4c 7888 9d4d 93a9 08e1 96d7 b5ec c6b4  
a37f 7719 87b2 65e8 f721 2f75 4d2e 65d4 4033 6997  
f1d8 8e77 da6d 00c1 2138 5fe7 5c0c 4ea8 6ea5 c3b7  
8bed 3dba 6253 d470 ad26 f696 5f57 53cc 8966 b4f8  
1e3d cab1 7888 80cd e0e1 ce8e 987b 9f5b 29e9 3d56  
3ad2 d1c7 8858 a3f1 217d 6cda 1110 08ec ceed 375a  
95a1 5599 d6d4 9318 9235 802e 017a 2c1b ad41 6bce  
2d21 4a8b 714f 21f7 8c3a 7466 1f1a 8e01 b3cf 314c  
d2a9 5ed2 adf7 4f2d be25 bdaf 3797 0b58 9b16 78d8  
9bcc 3b15 9e90 8d98 17ec f870 2e97 060e 3e13 912c  
9b60 61ea 67b1 45c7 0fa7 b9e6 da43 ef16 c70c 08c8  
e6cc 6396 2078 5abc b5d9 a1b0 d381 eabb 62ba 8209  
e2e9 dd16 ef9d 392f d5ed edc7 7309 4c56 f4f8 1353  
a131 2fab 0660 e0a1 38ac 8270 2234 0519 aaef 8182  
8168 f871 5dfb 4650 cb10 316a f840 d830 7439 8798  
6c12 1456 c97c 1d64 8405 25fc e526 99fa 3984 5695  
75a6 14e4 cde0 040b aeac 850f 9902 276d d375 2ef6  
e4ac 0018 3924 ac90 d839 6597 54a9 a8be a6bc 70ab  
0425 9154 17b2 775c dbc9 475b 8a13 d4cf 4c30 1b01  
e7b5 cbf4 7c51 0b39 fbea faf8 11b3 0e1f 3022 51ba  
5467 31bd 2275 eb20 6827 8aac 8265 522f 6ec7 62f5  
2417 9516 d67d 0802 71a1 be0c 2119 2150 4cf5 fd9c  
ef8d c6bb c85e d8e2 da70 9323 9a59 2a30 f8df 6e2c  
1a92 b760 115a f2b4 fbd0 1522 6ce9 c682 c599 4f14  
37e6 a209 8dea d15a 6753 3da0 4141 8611 f7c1 eca6  
4b1b a475 b047 9e38 1d84 2d3c a9b0 910b 2a4f 0dc3  
0978 09d9 7e53 0839 00bd 2cc8 9f13 6ef5 fc95 3ee2  
15d1 a05f 6bb1 fc94 826c 48f0 59df b8b5 54b1 77c3  
f200 0000

20949/18641/16312 kHz, 13-12, 1000/1010/1020 UTC  
1be9 b001 e91c 6ec3 4feb  
aa26 0c60 8167 8e48 8c0c f9f7 b8d6 1a3e ee95 f09f  
964f 94fb 246a e9b6 d8e2 51f3 db93 8ba1 9112 8d99  
e53a 6644 cce4 0c9b 399c b457 41e8 ba20 80b5 7df5  
744d 0d26 33c4 28a7 844e b470 bdf1 5d13 8bfc 84a4  
ac69 11f6 39c1 36c4 cb95 6d2c b875 d5ad 6e7b a1e6  
eea6 5dc4 2428 7e1f b9f2 17e2 cd4e 3923 8920 b42d  
8215 3b6f 751a e0dc c245 3797 6353 3518 87ef 6924  
9bec 3020 0000

17532/15631/13517 kHz, 12-12/06-12/13-12, 1100/1110/1120 UTC  
1be9 9012 1ae8 6e52 66ed  
3dbb 3587 a09a dd66 2b74 13a4 1211 ea34 1d40 da82  
a6d9 ed8b 865f f737 7337 0956 9b60 1045 967c b3bf  
dc9b abe3 fab1 ee05 c183 d65c e10c 1250 376d 4a26  
525c 2f83 a5cb 181a b729 b616 5435 c5b3 c42b 223a  
2128 3d83 b77b 76e3 348c 175e 6c1d 98f2 ccda 507a  
6998 1d66 ae2a ac9a 0515 e739 b22b fdd3 ca12 2500  
b02c da71 03af 8eb8 0fa6 a691 d7dc 462a 7d5d 0be4  
cc93 b063 e060 0718 7979 5c79 7c4f dc66 75f7 4615  
e2e4 348d 48da b402 88ba b9c8 f200 7c5c 883c bb4a  
0b54 c935 4640 0000

Description of the header:

The five groups at the top are the preamble. Respectively:

1. Message type.
2. Link ID.
3. Unknown. Has something to do with decryption?
4. Message date (former octet) + serial number (latter octet). Dates from 1st to 25th are encoded as 10, 20, 30, ..., 230, 240, 250 (decimal); dates from 26th to 31st are encoded as 4, 14, 24, 34, 44, 54 (decimal). Serial number counting starts at 2 and increases in +3/+2 steps: 2, 5, 7, 10, 12, 15, 17, 20, 22, 25, 27, etc.
5. Group count (former octet). It's useless, however, as it counts in data that is not part of the message. And because it wraps at 255.

Description of the protocol used.

When decoding this mode, keep in mind that the space (0) is at -500 Hz, and the mark (1) is at +500 Hz from the center frequency. However, an operator mistake is made sometimes of sending the signal inverted.

== Blocks ==

All data in this mode is packed into 288-bit blocks. Each block has the following fixed structure:

- \* Bits 0-31: Magic number; the constant 0x7d12b0e6.
- \* Bits 32-42: Block number; counting from zero.
- \* Bits 48-51, 64-67, 80-83, 96-99: Group #1.
- \* Bits 112-115, 128-131, 144-147, 160-163: Group #2.
- \* Bits 52-55, 68-71, 84-87, 100-103: Group #3.
- \* Bits 116-119, 132-135, 148-151, 164-167: Group #4.
- \* Bits 56-59, 72-75, 88-91, 104-107: Group #5.
- \* Bits 120-123, 136-139, 152-155, 168-171: Group #6.
- \* Bits 60-63, 76-79, 92-95, 108-111: Group #7.

This mode carries messages as 16-bit groups. There are seven groups in each block - note the interleaving. Decoding blocks is about pulling out the groups and putting them in the correct order. Decoding messages is about arranging the decoded blocks in the correct order, while ignoring the special informational blocks (see the section below).

The entire block sequence is repeated throughout the broadcast for 6-8 minutes. Each round is separated by a block that only contains the 32-bit magic number and 256 zero bits.

#### == Informational blocks ==

The block #0 and every 16th block thereafter (#16, #32, #48, #64, #80, #96, #112 etc.) is a special block, the content of which in each instance is identical. It contains the following information:

- \* Bits 0-10: Total number of blocks in a broadcast round, counting from one.
- \* Bits 13-15: Total number of messages in a broadcast round. Up to 8, always at least 1.
- \* Bits 16-26: Number of the first block of the first message. In practice, this always equals 1.
- \* Bits 28-38: Number of the first block of the second message. Set to zero if absent.
- \* Bits 40-50: Number of the first block of the third message. Set to zero if absent.
- \* Bits 52-62: Number of the first block of the fourth message. Set to zero if absent.
- \* Bits 64-74: Number of the first block of the fifth message. Set to zero if absent.
- \* Bits 76-86: Number of the first block of the sixth message. Set to zero if absent.
- \* Bits 88-98: Number of the first block of the seventh message. Set to zero if absent.
- \* Bits 100-110: Number of the first block of the eighth message. Set to zero if absent.

The above description assumes that the block's groups were assembled into one 112-bit string, an arrangement in which this block is easier to process.

The content of these blocks should not be treated as parts of messages. Instead, it shall be discarded.

#### == Message format ==

The messages in this mode are binary, and contain no textual content. The very first five groups are the preamble:

- \* Group #1: Message type. In most broadcasts, this is 0x1be9. In some short-lived schedules, this can be 0x1bc0.
- \* Group #2: Link ID. Fixed per schedule. This typically has the second nibble set to zero. Some unscheduled broadcasts may contain no link ID (0x0000).
- \* Group #3: Unknown.
- \* Group #4:
  - \*\* Former octet: Message date, as day of the month only. Days from 1st to 25th are represented as (decimal) 10, 20, 30, ..., 230, 240, 250, respectively. Days from 26th to 31st are represented as (decimal) 4, 14, 24, 34, 44, 54, respectively. If the stated day of the month is ahead of the first broadcast date, then it points to the previous month; otherwise, the current month is implied.
  - \*\* Latter octet: Serial number. Counting of this starts at 2, and increases in +3/+2 steps with each message. The sequence is: 2, 5, 7, 10, 12, 15, 17, 20, 22, 25, 27, 30, 32, etc.
- \* Group #5:
  - \*\* Former octet: Group count. Counts in the groups from the informational blocks. Wraps at 255. For both these reasons, it is quite useless, and can be safely ignored, as this mode already includes block numbers.

Lengths of messages vary between 40 and 900 groups. Messages always end in the group 0x0000, and the remainder of the last block is further padded with zeroes. If the block is already filled up completely with other groups, then one seemingly-empty block is added.

#### == Null messages ==

Even though these indicate that there is no traffic to pass, the protocol treats them as one actual message. Null message broadcasts consist of only three blocks - standard block #0, block #1 containing only the preamble, and an empty block #2. The message date always points to the broadcast date (in UTC!). The group count is always 4.

#### == Test rounds ==

8-12 minutes before the first broadcast of a schedule, several test rounds can be heard. These consist of the standard block #0, and one or more blocks of the plaintext ASCII string "4646CcCc6464cC", without the standard message preamble. Often only a part of this string is included.

Code	Freq	Date	UTC	Sequence
X06	13524	1-12	0752	Mazielka. Sequence: 125643
X06	16188	1-12	1341	Mazielka. Sequence: 325614
X06	12150	2-12	1500	Mazielka. Sequence: 256341
X06	12208	2-12	1512	Mazielka. Sequence: 256341
X06	14405	2-12	0922	Mazielka. Sequence: 256341
X06	16115	2-12	1107	Mazielka. Sequence: 215346
X06b	14761	2-12	0724	Mazielka. Sequence: 1--6--
X06b	16320	2-12	1219	Mazielka. Sequence: 1--6--
X06b	16320	2-12	1500	Mazielka. Sequence: 111222
X06	9041	3-12	1219	Mazielka. Sequence: 645321
X06	9354	3-12	1220	Mazielka. Sequence: 645321
X06	13940	3-12	1257	Mazielka. Sequence: 645321
X06	19511	3-12	0716	Mazielka. Sequence: 314265
X06	12215	4-12	1007	Mazielka. Sequence: 361245
X06	18197	4-12	1023	Mazielka. Sequence: 645321
X06	20837	4-12	1020	Mazielka. Sequence: 645321
X06	13452	7-12	0805	Mazielka. Sequence: 165324
X06	14825	7-12	0750	Mazielka. Sequence: 641523
X06	17511	7-12	0757	Mazielka. Sequence: 641523
X06	9174	10-12	1321	Mazielka. Sequence: 231654
X06	11467	10-12	1501	Mazielka. Sequence: 231654
X06	15676	10-12	1252	Mazielka. Sequence: 231654
X06	16324	10-12	0844	Mazielka. Sequence: 521634
X06	12055	11-12	0903	Mazielka
X06	15160	11-12	0900	Mazielka
X06b	13884	11-12	1409	Mazielka. Sequence 1--6--
X06c	15084	11-12	0746	Mazielka. Sequence: 123456
X06	14650	12-12	0939	Mazielka. Sequence: 215346
X06	16115	12-12	1026	Mazielka. Sequence: 215346
X06	12224	14-12	1006	Mazielka. Sequence: 463125
X06	12224	14-12	1007	Mazielka. Sequence: 43125
X06	13517	14-12	1043	Mazielka. Sequence: 463125
X06	13524	14-12	0751	Mazielka. Sequence: 125643
X06	14870	14-12	0810	Mazielka. Sequence: 156234
X06	15676	14-12	1226	Mazielka. Sequence: 231654
X06	16118	14-12	1033	Mazielka. Sequence: 463125
X06	8180	18-12	1334	Mazielka. Sequence: 241563
X06b	14538	20-12	1450	Mazielka. Sequence: 1--6--
X06	18177	23-12	0800	Mazielka. Sequence: 164253
X06	10214	24-12	1510	Mazielka. Sequence: 263145
X06	12126	24-12	0754	Mazielka. Sequence: 521634
X06	16153	24-12	0815	Mazielka. Sequence: 153624
X06	13423	28-12	1107	Mazielka. Sequence: 412635
X06	13517	28-12	0935	Mazielka. Sequence: 463125
X06b	14538	28-12	1237	Mazielka. Sequence: 1--6--
X06b	14538	28-12	1250	Mazielka. Sequence: 1--6--



XPA

**8146/7364/5864 kHz, 01-12, 1900/1920/1920 UTC**

138 138 138 1 138 138 138 1 138 138 138 1  
06397 00235 31686 46537 55418 65030 94052 66293 55165 86477  
03084 36427 45987 87147 34060 89409 99588 49470 62070 25531  
17916 25599 41139 98366 47701 53805 54521 22364 07985 53699  
42501 36275 16951 23675 98357 21288 60579 93125 03393 48899  
32762 56660 64030 60184 16047 38477 07412 35458 39928 44505  
38224 95210 20640 83801 46389 65183 22479 94999 69031 16717  
17151 75954 07929 09841 48658 26113 47618 38178 10623 33613  
46669 81734 15249 48764 98388 51157 11723 54035 59125 53719  
75900 02581 10260 62034 39765 89457 24426 18936 47226 63218  
36291 78892 10549 83304 54272 68664 42972 41268 87462 67333  
70893 63297 37069 64701 28806 53251 51495 74891 54055 99106  
24159 82702 18254 12893 87432 81358 71847 51403 91002 92852  
50230 36826 08117 50635 81400 03121 97754 23825 75620 25363  
03632 84225 13214 03223 15153 91709 05780 03632 34551 36553  
19305 53259 79606 07012 37788 25325 13816 80499 18854 80957  
28767 35891 95275 76104 12532 04098 49873 71856 78340 55587  
81813 29023 47221 52893 67874 74673 82815 85109 92010 70749  
05263 98399 64871 23096 52557 99073 20757 05986 67882 06200  
59154 35681 62766 13048 77448 11862 18382 10005 35620 40931  
12845 65520 44950 93651 55140 42446 91277 75862 72770 66425  
06609 45352 68358 94083 52089 73235 45860 22975 97585 00688  
45916 60646 41153 30245 38832 94793 14065 24055 67627 20758  
86430 06618 36584 84946 68516 46703 75140 27746 97881 03454  
69307 06810 03599 16700 87702 17017 30080 10422

**7756/9056/10656 kHz, 02-12, 0700/0720/0740 UTC**

706 706 706 000  
03270 00001 00000 10140

**7756/9056/10656 kHz, 05-12, 0700/0720/0740 UTC**

706 706 706 000  
07398 00001 00000 10140

**8146/7364/5864 kHz, 10-12, 1900/1920/1920 UTC**

138 138 138 000  
05044 00001 00000 10140

**7756/9056/10656 kHz, 16-12, 0700/0720/0740 UTC**

706 706 706 000  
06891 00001 00000 10140

**7756/9056/10656 kHz, 19-12, 0700/0720/0740 UTC**

706 706 706 000  
06679 00001 00000 10140

**7756/9056/10656 kHz, 09-12/12-12, 0700/0720/0740 UTC**

706 706 706 1 706 706 706 1 706 706 706 1  
02626 00161 45705 30484 65615 29104 13250 10649 26510 92210  
97269 82642 35298 55838 14939 09028 87276 39422 17462 90995  
26546 40835 85348 03656 98581 26870 53910 06476 35174 73568  
32931 65975 23642 48503 00369 28753 42627 98706 22433 32106  
39673 38792 50073 96942 02736 62873 91019 93312 19592 64584  
85619 76885 74928 53924 51323 86459 26706 32649 50501 03616  
88763 56644 16163 66765 35485 42513 61908 01050 09531 53208  
87543 87643 75873 16850 42639 94204 46366 07317 06584 18467  
98917 27666 54575 68799 32828 01943 79451 77612 89806 07763  
47639 87719 82516 48983 81183 29888 57236 90975 38573 30685  
61340 75203 93225 84336 95614 94378 26642 26422 45689 30276  
61095 39357 24113 90060 21572 26134 49201 04644 36438 45404  
92587 74982 09827 94951 94832 74836 14560 43721 34812 05409  
46198 77174 30216 54882 06919 45611 55458 73950 84384 88301  
68368 88285 91880 48238 15852 99637 72124 85396 47973 81329  
16380 21976 37300 90746 23805 22995 33741 48847 58213 78196  
19070 13440 32986 04030

**7756/9056/10656 kHz, 26-12, 0700/0720/0740 UTC**

706 706 706 1  
01293 00206 52595 56880 67702 45952 12637 40540 69017 28261  
29904 01609 58586 10312 16848 68981 63757 41488 20025 37922  
06694 15824 04941 90349 07907 39913 74930 33626 84136 86031  
45069 68630 13550 16334 78308 09816 45856 04781 19347 13885  
94083 36664 87751 35411 09372 31700 64392 81846 75172 23905  
23636 49623 79142 40860 78465 98307 66081 62633 82709 03978  
06881 81037 23914 47490 98054 62047 44583 55716 82525 39323  
75057 26803 69961 07462 86031 02585 22928 52422 68896 35982  
28912 98165 24717 45065 89062 20578 58388 68963 27546 14001  
33409 59417 77970 95383 59496 24653 19286 87308 84894 27001  
47400 09288 16712 87327 16906 21484 90382 08589 11112 44077  
47931 20124 15234 61475 76337 90454 46315 24830 02116 06551  
99752 35715 29109 09496 62594 58925 89424 02683 42611 16906  
96186 95032 66299 48381 35837 32689 56490 10485 48082 18923  
47498 98860 65398 61807 84083 84659 07908 98618 17056 16498  
28015 49301 10616 70692 42381 06501 83702 17074 15465 48450  
96773 57722 31146 90750 81836 59311 39029 28154 08064 88776  
19265 86586 30829 54938 79517 70812 92590 25981 64289 23966  
58277 45185 98165 58048 10683 96643 79718 27992 72739 17700  
67129 21044 07362 25258 58205 24615 72972 35743 56501 75361  
90501 58068 13630 52562 67010 96737 77070 76107 10452

**7756/9056/10656 kHz, 30-12, 0700/0720/0740 UTC**

706 706 706 000  
02942 00001 00000 10140

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## XPA2

### **14538/13528/12138 kHz, 01-12, 1300/1320/1340 UTC**

05594 00075 38087 32551 81848 93056 22102 23933 27051 89860  
43351 52282 55665 41362 64223 01397 93278 79926 84937 91854  
71036 76299 09752 93699 94984 04889 81843 45701 35079 51465  
00041 04961 42270 04478 39218 93750 91435 68765 13277 19921  
33793 62736 33761 08636 10312 52024 14542 87485 15908 69269  
80467 61576 10125 33389 92674 17344 62941 70891 95033 63993  
77727 65732 58490 11091 04382 45992 98496 28976 23727 50387  
24739 77507 00445 90399 91770 70284 22113 37211

### **7756/9056/10565 kHz, 02-12, 0700/0720/0740 UTC**

03270 00001 00000 10140

### **15861/14761/13561 kHz, 02-12, 0800/0820/0840 UTC**

04262 00091 46699 87358 63576 33751 52293 45196 92455 21112  
35544 92342 22499 36696 27585 11754 97286 88063 07236 92246  
15737 53731 20849 55659 47106 37813 16343 44643 39995 12840  
89759 63403 33580 37524 37372 86288 37795 17473 12175 04720  
99618 70196 44658 29918 84941 43125 39136 08588 76455 37915  
46575 37095 34054 82579 58515 95688 17200 09293 68746 86720  
90507 17006 28910 97393 83234 09467 14237 94551 21137 97143  
97721 76111 66447 45376 36542 36636 10843 09715 30680 71131  
31624 72250 00712 66026 55107 80357 48559 14994 44229 40040  
33333 03900 23865 04251

### **13393/14493/16293 kHz, 04-12, 0700/0720/0740 UTC**

00396 00079 88881 81254 12498 23011 48054 54076 60504 58662  
70953 97695 51856 53150 97028 56352 32523 68757 42801 47524  
76319 53904 53034 05794 54066 25456 06686 28808 12329 58189  
01387 01020 55973 04286 86403 70489 32953 87255 56023 91720  
25689 89768 51875 99259 30609 35761 41697 57823 12188 57188  
16586 67678 41566 36202 67833 49902 49781 63747 31828 48705  
92448 87044 99996 34130 63909 89969 09519 60729 04321 13428  
33697 55193 18409 91520 70789 85354 81958 43701 05211 26374  
04168 10205

### **15967/13884/12217 kHz, 04-12/05-12, 1400/1420/1440 UTC**

07894 00089 80713 60051 74319 02716 98386 09704 86603 08238  
79052 39522 06997 28962 76601 07427 07288 88540 28423 80204  
16295 52705 04227 99086 63064 12411 82175 30101 62007 49045  
07133 56846 84730 57862 87338 05936 68634 02564 67923 02848  
46489 28097 48506 78807 38742 41338 62924 88298 22226 36771  
29086 28556 79046 40017 14147 27725 58233 87625 63708 65014  
50101 06364 88625 66566 67070 62585 59651 43483 22935 64822  
32214 20683 50038 93606 49233 76670 00955 72841 92877 65637  
65510 02138 59193 91432 64448 11944 77602 30024 90621 55907  
81777 46240

### **14538/13528/12138 kHz, 06-12, 1300/1320/1340 UTC**

00001 00000 10140

**13393/14493/16293 kHz, 08-12, 0700/0720/0740 UTC**

05634 00001 00000 10140

**14538/13528/12138 kHz, 08-12, 1300/1320/1340 UTC**

1300 UTC: Stops after 1,5 mins start tones. Carrier briefly up at 1303z.

1320/1340 UTC: 01619 00001 00000 10140

**15861/14761/13561 kHz, 09-12, 0800/0820/0840 UTC**

03230 00001 00000 10140

**13393/14493/16293 kHz, 11-12, 0700/0720/0740 UTC**

03230 00001 00000 10140

**15967/13884/12217 kHz, 11-12, 1400/1420/1440 UTC**

02587 00077 33114 78930 75100 69352 34295 88893 62438 28852  
31165 12408 86656 34225 64286 43986 28613 53765 67141 44304  
72637 58079 64304 11263 75736 80297 97136 26583 62125 41523  
27930 32974 69748 78251 33009 12556 35912 25466 16399 30618  
01724 97052 84874 85509 93666 22270 20764 65124 41590 25508  
02913 16405 78931 27251 69747 59286 92260 26555 44472 45979  
72797 26574 90120 23781 13105 78322 15287 64484 46514 63482  
71435 79811 03234 55419 64350 38482 10880 06184 54582 52111

**15861/14761/13561 kHz, 14-12/16-12, 0800/0820/0840 UTC**

06471 00107 57392 36006 55572 93072 70609 77870 07361 36090  
82701 37944 53220 36655 66383 49667 50040 43393 82693 60312  
07796 81571 91514 10339 50140 61644 47607 35784 12678 56408  
62980 44842 39786 46786 85521 92780 54753 99951 45240 28074  
78020 93662 46628 24069 18577 51418 29908 34123 97571 33415  
26703 13276 05184 75342 50203 65892 25159 97166 91518 34268  
81998 50367 05106 17102 63952 86042 89327 65284 57583 03326  
75581 34433 28799 63457 20226 94960 47636 50870 00492 41039  
13476 47038 68481 21453 84689 92047 94096 91678 76486 60222  
62897 84777 46623 59359 46094 85454 95098 53457 81638 04572  
24797 33337 51817 59955 34655 18515 28135 07776 92669 50016

**13393/14493/16293 kHz, 15-12, 0700/0720/0740 UTC**

07524 00001 00000 10140

**14538/13528/12138 kHz, 15-12, 1300/1320/1340 UTC**

00147 00097 71416 21683 11211 61844 21626 80298 47734 49707  
34950 37938 73541 21383 55268 02425 25843 65680 42353 33863  
70082 80977 01380 52811 38664 46458 58801 34655 36098 71568  
53707 94385 45555 15444 26538 17595 03235 89355 59991 47905  
46255 99063 39312 16762 18160 90699 80368 29225 90181 68457  
38563 37866 11646 97800 30129 51046 22633 00419 33331 71482  
44559 80685 68819 30352 31681 77047 12037 51776 13085 48379  
99088 92720 82755 67222 17774 00614 63288 66578 33623 66452  
46714 11303 22777 38633 69169 00566 26261 36698 27166 19739  
83137 27876 29131 28700 39662 46604 33632 33136 66580 51026

**13393/14493/16293 kHz, 18-12, 0700/0720/0740 UTC**

06042 00001 00000 10140

**15967/13884/12217 kHz, 18-12, 1400/1420/1440 UTC**

02575 00001 00000 10140

**15967/13884/12217 kHz, 19-12, 1400/1420/1440 UTC**

07659 00001 00000 10140

**14538/13528/12138 kHz, 20-12, 1300/1320/1340 UTC**

04183 00001 00000 10140

**15861/14761/13561 kHz, 21-12, 0800/0820/0840 UTC**

08141 00001 00000 10140

**13393/14493/16293 kHz, 22-12/25-12, 0700/0720/0740 UTC**

09250 00119 43492 56864 71960 85114 84502 34653 75527 16732  
55517 72327 13308 74058 94584 73556 89624 55464 13385 62670  
32662 75224 41159 31228 49113 02757 32173 84805 95357 39316  
18097 80868 75333 23683 55390 36136 84375 92011 43344 01249  
69232 45428 24226 10202 10789 02721 72647 30317 85355 60346  
57755 13362 82680 33048 32137 69575 98570 62961 22738 40631  
27471 17903 90007 25980 08431 55935 82339 77688 26565 87738  
21760 08450 07318 09770 05792 12321 25894 94439 42221 73986  
41166 15243 28267 56858 27576 33381 21122 07128 17759 27678  
42946 88923 82552 71632 76472 71208 53879 48751 18528 46412  
02521 36937 20808 95223 03793 89039 24810 89010 25298 19938  
62136 28786 35252 07532 47022 07711 07738 77240 78301 78753  
26785 24046

**14538/13528/12138 kHz, 22-12, 1300/1320/1340 UTC**

08393 00001 00000 10140

**15861/14761/13561 kHz, 23-12, 0800/0820/0840 UTC**

09306 00001 00000 10140

**15967/13884/12217 kHz, 25-12/26-12, 1400/1420/1440 UTC**

07719 00121 67628 40811 98048 81626 65985 99928 78229 74428  
24402 53600 74459 42199 08312 36954 06210 87467 72696 84112  
94392 62947 67519 51807 76043 65673 01293 50315 25613 26100  
04440 02558 33222 33096 23872 19117 19775 81612 92822 56893  
64275 71436 41993 21583 85857 01206 02421 67118 11124 62253  
59563 52590 12466 67208 08021 31444 63704 88926 07186 26459  
43985 50751 38455 21072 30591 02871 18089 29860 37981 47350  
43389 23228 49003 50139 41624 22577 56844 64993 40845 49398  
35844 26669 63611 06105 33270 23185 36927 54603 67479 84858  
85254 15583 60253 04797 76308 05100 41462 20936 55222 67591  
18714 40228 64493 18009 43268 36398 14695 01753 90494 84608  
69767 72728 41903 89704 37387 71519 85830 25226 65209 06572  
80304 97065 80671 11065

**13393/14493/16293 kHz, 29-12, 0700/0720/0740 UTC**

02087 00001 00000 10140

**14538/13528/12138 kHz, 29-12, 1300/1320/1340 UTC**

03486 00067 37415 27136 10853 75408 20132 36524 67785 39245  
58707 56008 99377 56044 16110 52428 64188 58184 84088 59476  
89900 34175 51273 29319 43201 01929 56324 03247 12985 48561  
27764 17390 56781 38931 59193 41572 43627 29071 24048 77651  
40431 55266 00417 32920 87533 89887 18287 96690 72356 47711  
41724 31609 79489 98229 94009 51957 18776 34376 03483 42575  
75093 00764 15759 86450 34876 71299 12408 05873 75272 23137

**15861/14761/13561 kHz, 28-12/30-12, 0800/0820/0840 UTC**

07532 00123 79574 15244 08502 58022 98891 71368 42617 18051  
05690 28754 24141 66068 77609 18934 24739 02466 23667 58203  
04362 20248 21733 53709 33868 86852 12775 69434 03642 86046  
32337 57838 18555 65348 04961 47381 34205 66278 40371 48525  
96339 27523 19131 66703 39207 66808 58623 04416 61859 50743  
80197 15765 13509 13418 96623 73013 67313 46919 43389 54872  
39015 65103 00174 01481 08148 16406 09516 31477 98675 28141  
16733 63844 48293 98704 62002 71525 53015 30654 79120 82578  
13796 33711 15288 21285 70198 63462 96917 93770 95356 67757  
38355 71940 23603 43189 97742 53334 18328 48539 67939 31194  
62731 24969 14665 12807 89230 72167 73307 91550 35797 02094  
28502 16514 29784 48257 18651 41655 21726 06537 21239 80180  
80269 22344 49478 52585 49006 25467

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**Polish Intelligence**  
**(E11 family)**

**10359 kHz, 01-12/04-12, 0655/0700 UTC**

0684 0684 2184 0684 0684  
88888 88888 28815 54112 90238 70968 04923 31777 14181 19596  
64597 20277 18317 94773 97097 01798 73458 03914 49447 35128  
60181 54154 22361 87274 85313 44760 52472 92370 61991 72046  
73871 46613 68929 22296 44254 49651 89717 07698 69237 19419  
38510 88888 88888  
00043 00043

**6836 kHz, 03-12/07-12, 0800/0805 UTC**

0434 0434 0434 0434 0434  
88888 88888 86939 95930 27437 15097 43810 69503 28021 90982  
79942 20405 75985 25015 17090 02413 20768 74761 26128 71126  
42433 25448 15137 62954 79855 75617 36552 43636 67492 82182  
37579 49456 60702 86274 75696 59261 52246 49997 22538 82964  
88888 88888  
00042 00042

**9968 kHz, 07-12, 0815/0820 UTC**

0446 0446 0446 0446 0446  
88888 88888 86558 37165 08374 12085 84540 06442 33928 98554  
21237 49480 39491 16831 22873 47443 81816 75216 76854 85013  
04576 99071 85946 46691 24082 41982 78368 91193 05414 10047  
67034 72644 55795 52189 34252 48424 84792 54094 89059 09549  
09100 88888 88888  
00043 00043

**10641 kHz, 08-12/09-12, 1150/1155 UTC**

0325 0325 0325 0325 0325  
88888 88888 42985 52090 07945 38017 45802 93127 61109 73165  
78570 96714 36437 16255 90678 83592 63969 44357 77855 67682  
58150 00365 75632 59296 96815 74340 12188 30290 10172 41782  
86120 70194 89349 18388 54244 68697 75721 99199 88888 88888  
00040 00040

**4505 kHz, 10-12, 1305/1310 UTC**

0437 0437 0437 0437 0437  
88888 88888 33819 41449 80649 52212 89206 32239 24505 18609  
65422 32655 37575 63219 73968 87506 49445 75557 57376 81097  
26166 85451 76152 30448 59038 76447 57380 29390 24345 09225  
97020 02036 70856 rest garbled  
00037 00037

**9968 kHz, 11-12, 0815/0820 UTC**

0446 0446 0446 0446 0446  
88888 88888 46558 37165 08374 12085 84540 06442 33928 98554  
21237 49480 39491 16831 22873 47443 81816 75216 76854 85013  
04576 99071 85946 46691 24082 41982 78368 91193 05414 10047  
67034 72644 55795 52189 34252 48424 84792 54094 89059 09549  
09100 88888 88888  
00043 00043

**6836 kHz, 14-12/17-12, 0800/0805 UTC**

0434 0434 0434 0434 0434  
88888 88888 43830 88156 14268 09353 52879 43375 23044 69014  
63323 88953 28820 36506 55505 85649 42791 26618 84900 64955  
44751 31405 78688 35801 21770 67493 59190 35739 35741 00667  
46874 23147 73974 54353 32499 83028 02932 32272 88888 88888  
00040 00040

**7772 kHz, 17-12, 0630/0635 UTC**

0574 0574 0574 0574 0574  
88888 88888 08235 04070 40840 14911 85010 60923 68355 57761  
91767 20660 15851 34332 14913 27597 33694 25169 49917 65897  
16572 20129 75847 92558 31286 88476 38436 70486 95131 05988  
72009 58507 80899 26707 79645 52209 88888 88888  
00038 00038

**9179 kHz, 19-12, 1610/1615 UTC**

0877 0877 0877 0877 0877  
88888 88888 36361 20346 84408 81345 09473 41072 57833 29526  
13891 67134 10402 37904 62668 21581 70500 18194 80762 81253  
86036 99280 66429 26235 39430 57820 00142 10838 05277 38608  
26790 49724 06047 74153 90121 15887 96587 44317 31473 62096  
12484 30940 88888 88888  
00044 00044

**7499 kHz, 22-12, 0900/0905 UTC**

0554 0554 0554 0554 0554  
88888 88888 85427 15016 46956 04670 41804 97734 28528 48633  
90569 82312 10265 87018 62273 39134 44904 20447 75883 84443  
56907 05159 85609 79963 18471 88916 96691 05710 61831 46745  
23087 97368 82126 35806 36617 78563 87621 82538 88888 88888  
00040 00040

**16388 kHz, 24-12, 0730/0735 UTC**

0433 0433 0433 0433 0433  
88888 88888 47958 56104 25062 12147 96877 75970 02203 10459  
26509 36927 23017 50886 36599 20006 21796 08507 28222 42953  
13450 51321 01616 50334 43939 50078 74581 31543 10674 45417  
56826 54650 94051 83494 88888 88888  
00036 00036

**9370 kHz, 28-12/30-12, 0845/0850 UTC**

0353 0353 0353 0353 05353  
88888 88888 24991 30932 27484 19208 16978 68187 57358 84448  
52315 58052 62173 06883 25847 62688 11450 71891 36806 26741  
38818 53323 51992 88826 44044 80310 70570 66191 92490 42133  
54792 29294 01374 88888 88888  
00035 00035

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**Q26**

Mode: 4+4 QPSK 75/3000 LSB

**8073 kHz, 06-12, 0001 UTC**

Voice callup:

DingHai de 259 We have (a message) for you. Please copy.

DingHai de 259, the message is coming up, copy (into 4+4 traffic)

F BNGC BNGC BNGC DE VSF85 VSF85 F BNGC BNGC BNGC DE VSF85 VSF85  
F BNGC BNGC BNGC DE VSF85 VSF85 F BNGC BNGC BNGC DE VSF85 VSF85  
HR MSGS GA PSE CY \$

NR1036 CK136 35 1206 0721 --

006 324 314 012 773 017 773 018 773 023  
773 354 373 403 993 447 468 385 480 486  
019 773 353 403 993 446 468 384 480 486  
020 773 353 402 993 447 468 385 342 938  
403 993 446 384 480 486 021 773 353 373  
403 993 446 467 384 480 486 022 773 024  
773 354 373 403 993 447 385 480 486 025  
773 357 372 404 993 446 384 342 938 403  
993 447 385 480 486 026 773 357 372 403  
993 446 383 342 938 384 480 486 027 773-1  
357 372 403 993 435 466 380 002 342 938  
383 480 486 029 773 353 372 403 993 446  
467 384 480 486 030 934 033 773 353 403  
993 435 380 002 480 486

MSG AGN

NR1036 CK136 35 1206 0721 --

006 324 314 012 773 017 773 018 773 023  
773 354 373 403 993 447 468 385 480 486  
019 773 353 403 993 446 468 384 480 486  
020 773 353 402 993 447 468 385 342 938  
403 993 446 384 480 486 021 773 353 373  
403 993 446 467 384 480 486 022 773 024  
773 354 373 403 993 447 385 480 486 025  
773 357 372 404 993 446 384 342 938 403  
993 447 385 480 486 026 773 357 372 403  
993 446 383 342 938 384 480 486 027 773-1  
357 372 403 993 435 466 380 002 342 938  
383 480 486 029 773 353 372 403 993 446  
467 384 480 486 030 934 033 773 353 403  
993 435 380 002 480 486

AHR MSG GA

NR1037 CK36 35 1206 0726 --

012 952 006 953 006 954 700 011 746 705  
770 893 707 012 773 017 773 018 773 019  
773 020 773 022 773 023 773 024 773 025

773 719 718 947 314 725  
 MSG AGN  
 NR1037 CK36 35 1206 0726 --  
 012 952 006 953 006 954 700 011 746 705  
 770 893 707 012 773 017 773 018 773 019  
 773 020 773 022 773 023 773 024 773 025  
 773 719 718 947 314 725  
 AHR CW WK \$

**Logs submitted by JPL.**

Freq	Date	UTC	
8073	1-12	1131	Message
8073	2-12	0001	Message
8073	3-12	1134	Message
8073	6-12	0001	F BNGC BNGC BNGC DE VSF85 VSF85 HR MSGS GA PSE CY \$ NR1036 CK136 35 1206 0721 -- 006 324 314 012 773 017 773 018 773 023 ...
8073	7-12	0001	Message
8073	8-12	1131	Message
8073	9-12	0001	Message
8073	9-12	1130	Message
8073	10-12	1130	Message
8073	12-12	0001	Message
8073	12-12	1129	Message
8073	15-12	1130	Message
8073	16-12	0002	Message
8073	16-12	1138	Message i.p.
8073	18-12	1136	Message
8073	28-12	0003	Message



*ISI*  
Pakistani Intelligence

**19889.7 kHz, 03-12, 1045 UTC, Pactor-II 100**

ZCZC  
 ISOKD PSLAP QZMAE OYDQL LPQCQ VTOTZ LMAVS TBSYY VIEQI KHQPB  
 TLCMJ LXJIP SCEMW LSIHI YCZTJ QJSGM YSNCP ZSASL GKUQC RAXQH  
 etc.....  
 GMQVG ZNWFI JBCKT LMVUE EYPLI SEDKM IIISA XCZAZ RITRZ NOLFD  
 LFHJR FFHNR MZFID KSBFJ DKPUC TYHKB ODMKV IGM  
 NNNN



North Korean diplomatic stations

Freq	Date	UTC	Details	Mode
20250	2-12	1408	North Korean Embassy, Havana	DPRK-ARQ 600/600 LSB
10500	12-12	1452	N. Korean diplo	DPRK ARQ/600/600 LSB
16855	30-12	1339	MFA, Pyongyang (QSX 17320 kHz)	DPRK-ARQ 1200/1200 LSB

Freq	Date	UTC	Details	Mode
17320	30-12	1341	North Korean Embassy (QX 16855 kHz)	DPRK-ARQ 1200/1200 LSB



## Egyptian diplomatic stations

Modes: SITOR-A 100/170 & Codan-9001

Freq	Date	UTC	Details	Mode
9045	2-12	1918	MFA Cairo clg selcall TVXQ into CODAN 16 tone modem traffic	Sitor-A 100/170
9078.7	17-12	0030	Egyptian embassy Havana wkg MFA Cairo in clear English	SITOR-A 100/170
9089.7	17-12	0030	MFA Cairo wkg embassy Havana in clear English	SITOR-A 100/170
20086.7	21-12	1507	Egyptian Embassy, Bamako hex offline crypto to 71: MFA	SITOR-A 100/170
11065	31-12	2330	Egyptian diplo: OKDS JG KDCFUSG 6609 JG KYCIWZ 6609, then QSY to 9066 in SITOR-A	SITOR-B 100/170



## Sudanese diplomatic stations

20204.2 kHz, 15-12, 1524 UTC

Sudanese Diplo, Khartoum & Sanaa. Mode: Pactor-1

## UTILITY ROUND-UP



### Unid stations

#### Solved unid:

6770 kHz, 25-11, 1110 UTC: "JJ077 VVV VVV JJ077 VVV VVV JJ077 VVV VVV JJ077 VA" This appears to be a M89 station.

#### New unids:

#### 4852 kHz, 06-12, 2017 UTC, Unid, CW, logged by JPL

VV S9RR DE CO7G K  
VV LNW9 DE CO7G K K  
VV LNW9 DE CO7G K K

#### 4850 kHz, 08-12, 1903 UTC, CW, logged by JPL

RTK DE RDI QSA 3 QRM QSA ? K  
OK 3515 K

Last month I mentioned an unid Russian station call 1 0 3 on **13985 kHz, 06-11, 0745 UTC**. The same voice was heard earlier by qsr711 on **6985 kHz, 15-03, 1425 UTC**, calling 20 4. Note the last three figures of the frequencies! A coincidence? Recordings of both transmissions are on the N&O website. Info is most welcome.



Two possibly related stations popped up in December. Copied by Jim, JkC, Danix, Ary and Peter. The groups in the messages are sent twice. It is probably a training net of M14/M24.

**2518 kHz, 15-12, 2010 UTC**

730 730 730 27247 27247 (repeated)

**10755 kHz, 22-12, 1007 UTC**

975 975 975 45687 45687

975 975 975 45688 45688

(repeated for 4 minutes)

00000

**10755 kHz, 22-12, 1234 UTC, i.p.**

50798 68528 86234 42404 68609 53755 56982 72432 33203 94201 43999

= 000 000 30 30 00000

**10755 kHz, 22-12, 1300 UTC**

975 975 975 45678 (R4) 000 000 30 30 = =

83625 92883 20091 68941 87769 61037 12172 27770 75371 18074

43411 31911 12638 36278 50798 68528 86234 42404 68609 53755

56982 72432 33203 94201 43999 52441 37532 16205 38301 11157

= = 000000

975 (R4) 000 000 30 30 = =

83625 92883 20091 68941 87769 61037 12172 27770 75371 18074

43411 31911 12638 36278 50798 then long tone

975 (R4) 000 000 30 30 = =

83625 92883 20091 68941 87769 61037 12172 27770 75371 18074

43411 31911 12638 36278 50798 68528 86234 42404 68609 ends abruptly

12345 67890 (R19, then silent at 1344 UTC)

**10755 kHz, 22-12, 1348 UTC**

975 975 975 45678 (R4) 000 000 30 30 = =

83625 92883 20091 68941 87769 61037 12172 27770 75371 18074

43411 31911 12638 36278 50798 68528 86234 42404 68609 53755

56982 72432 33203 94201 43999 52441 37532 16205 38301 11157

= = 000000

975 (R4)

83625 92883 20091 68941 87769 61037 12172 27770 75371 18074

43411 31911 12638 36278 50798 68528 86234 42404 68609 53755

56982 72432 ends abruptly

975 975 975 45678 (R4)

83625 92883 then long tone

975 (R4)

83625 92883 20091 68941 87769 ends abruptly at 1418 UTC

**10755 kHz, 23-12, 0825 UTC**

975 975 975 45687 (R4) 000 000 30 30 = =

83625 83625 92883 92883 20091 200

(End of transmission)

**10755 kHz, 23-12, 0832 UTC**

975 975 975 45687 (R4) 000 000 30 30 = =  
83625 83625 92883 92883 20091 20091 68941 68941 87769 87769  
61037 61037 12172 12172 27770 27770 75371 75371 18074 18074  
43411 43411 31911 31911 12638 12638 36278 36278 50798 50798  
68528 68528 86234 86234 42404 42404 68609 68609 53755 53755  
56982 56982 72432 72432 33203 33203 94201 94201 43999 43999  
52441 52441 37532 37532 16205 16205 38301 38301  
= = 000 000 30 30 00000  
(Only 29 groups were sent)

**10755 kHz, 24-12, 0805 UTC:** 975 (R4)

**10755 kHz, 24-12, 1048 UTC, ends at 1106 UTC**

975 975 975 12345 (R) long tone  
83625 83625 92883 92883 stops, then 18074 18074 43411 43411 31911 31911  
975 875 975 12345 (R)  
975 975 975 00000 (R)  
975 975 975 (R4)

**10755 kHz, 25-12, 0740 UTC:** 975 45687 000 30

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*Intelligence news*

IntelNews published the Year in Review: The 10 Biggest Spy-Related Stories of 2015

Part 1 <http://intelnews.org/2015/12/30/01-1835/>

Part 2 <http://intelnews.org/2015/12/31/01-1836/>

Also interesting:

Cryptologic Aspects of German Intelligence Activities in South America during World War II

[https://www.nsa.gov/about/files/cryptologic\\_heritage/publications/wwii/cryptologic\\_aspects\\_of\\_gi.pdf](https://www.nsa.gov/about/files/cryptologic_heritage/publications/wwii/cryptologic_aspects_of_gi.pdf)

German Clandestine Activities in South America in World War II

[https://www.nsa.gov/public\\_info/files/cryptologic\\_histories/german\\_clandestine\\_activities.pdf](https://www.nsa.gov/public_info/files/cryptologic_histories/german_clandestine_activities.pdf)

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<p><b><i>RUSSIAN MILITARY TRANSCRIPTS</i></b></p>
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Excerpts from logs submitted by Ary, Ron, JPL, André



## *RMv/RNv/RNAv/RAv* *Russian military stations*

Frequency: various Mode: USB / voice

### RAv – Russian Air Force

#### **11360 kHz, 02-12**

1310 UTC Korsar (Russian Air Force 334th Air Transport Regiment, 6985th Air Base, Pskov) USB w/78795 (IL-76MD) reporting 1 hr into flt w/29 tons fuel & "ops normal".  
 1316 UTC Korsar USB w/82037 (Russian AF AN-124-not heard) reporting 2 hrs into flt w/27 tons fuel & "ops normal".  
 1322 UTC Korsar USB w/82035 (Russian AF AN-124) reporting 1 hr into flt w/63 tons fuel.  
 1329 UTC 76722 (IL-76MD) USB w/Davlenie (Russian Air Force 708th Air Transport Regiment, 6958th Air Base, Taganrog) reporting departure from Kvartet (Russian AB Taganrog) at 1613 MSK and next is Batareya (Russian AB Dzhankoy).  
 1332 UTC Korsar USB w/78805 (IL-76MD) reporting 2 hrs into flt w/20 tons fuel & "ops normal".

6685 kHz, 02-12, 1645 UTC Korsar USB w/76779 (IL-76MD) reporting landing at Chkalovskij.

### RMv – Russian Military

4751 kHz, 08-12, 0646 UTC LABART-38 Comms checks with outstations  
 4061 kHz, 14-12, 1320 UTC DIMAR-33 comms checks outstations

### RNv - Russian Navy

8252 kHz, 06-12, 0300 UTC BUKSOL comms checks with outstations  
 4042 kHz, 10-12, 1524 UTC VESTNIK (RMP) comms checks with BOKOAT (RFK99)

### RADv – Russian Air Defense tracking net

4993 kHz, 04-12, 0553 UTC, LSB	5401 kHz, 19-12, 0902 UTC, USB
5176 kHz, 04-12, 0556 UTC, LSB	5176 kHz, 20-12, 1248 UTC, USB
3595 kHz, 07-12, 0553 UTC, USB	2705.5 kHz, 20-12, 1504 UTC, USB
4240 kHz, 10-12, 0715 UTC, USB	4862 kHz, 22-12, 0745 UTC, USB



## *M32* *Russian / CIS Military CW Stations*

#### **5123 kHz, 08-12, 1237 UTC**

IK7R DE M8TK K  
 IK7R DE M8TK K  
 QSA NO QSY 50561 50561 K  
 QSA ? K  
 QSA 1 QSA Y 50561 50561 K  
 BK BK QSA 1 QLO 20 QLO 20 K  
 QLO 20 QLO 20 K  
 QLO 20 QLO 20 K

**4640 kHz, 10-12, 0603 UTC**

10-12-2015 0603z

RXA5 de RZD2 QSA ? K

RXA5 de RZD2 QSA 5 K

RYH2 de RZD2 QSA ? K

RYH2 de RZD2 OK GUHOR K

RAY5 de RZD2 QSA ? K

RAY5 de RZD2 OK GUHOR K

CQ CQ CQ de RZD2 NIL GB 73 SK

9169 kHz, 09-12, 1014 UTC XXX XXX NGIY NGIY 55346 82429 N.OFILA 9277 5432 OMORF 4988 9436 K

UUUUUUUUU XXX XXX (Into data mode)

7931 kHz, 09-12, 1020 UTC 4OF2 DE 8OLL QTC ZNF 339 200 9 1235 339 = ZNF 778 =

MMMM HQYÜG QNDEO VCÖNP (Cont'd)

7806 kHz, 09-12, 1022 UTC TSLP DE OCWQ K

5396 kHz, 09-12, 1032 UTC XXX XXX ETAP ETAP JOEL JOEL 15272 53944 ALXDABRA 3621 6499 K

5127 kHz, 09-12, 1034 UTC 727 = LDBO LDBO LDBO QTC 299 29 9 1330 299 = 334 =

IZLDR RGRNÜ DDDDD EAZKU FÄBQO (Cont'd)

3965 kHz, 11-12, 0702 UTC 2S3K comms checks and QTCs with 11 outstations in Dx (outstations on 3742) //4256.5

3863 kHz, 10-12, 1832 UTC 9MJV comms checks with 5 outstations in Dx - Ostns on 3211

4862 kHz, 08-12, 0600 UTC AF8H comms checks and QTCs with 4 outstations

6193 kHz, 11-12, 0702 UTC 8DLT comms checks and QTCs with 16 outstations

6851 kHz, 11-12, 0542 UTC MEKTAR-15 comms checks with outstations

2706 kHz, 28-12, 1622 UTC XXX WEGI 80812 TRILISTNIK 3528 2782 K

2706 kHz, 28-12, 1751 UTC XXX WEGI 15162 ÉTILGEKSEN 4370 5809 K

12631 kHz, 28-12, 0951 UTC RDL RDL RDL 871T1 83746 871T1 83746 871T1 83746 K

12631 kHz, 28-12, 0952 UTC UUUUU XXX XXX WEGI WEGI 86847 66166 BURAEWEC 8512 1323

XXX XXX WEGI WEGI 86847 66166 BURAEWEC 8512 1323 K

**4603 kHz, 19-12**

0409 UTC WWKP de 7W5G QTC 07 07 07 07 = 9870 6002 2280 9951 8979 8123 0888 K

0410 UTC WWKP de JZ3K R 07 ? K

0438 UTC WWKP de JZ3K QTC 08 07 0730 = 9954 7584 1328 9224 3834 9432 8537 K

0458 UTC WWKP de 7W5G QTC 09 07 0755 = 9141 7352 2618 9954 3208 1033 8014 K

0510 UTC WWKP de JZ3K QTC 09 08 0810 = 4430 4720 7466 2494 9174 1994 2676 2613 K

0526 UTC WWKP de 7W5G QTC 10 07 0826 = 4400 3331 7588 5999 7227 3524 0341 K

0543 UTC WWKP de 7W5G QTC K

0548 UTC WWKP de 7W5G QTC K

0558 UTC WWKP de 7W5G QTC 11 07 0856 = 8404 3098 0646 9954 7594 0108 7307 K

**2545.5 kHz, 29-12, 1745 UTC, logged by André**

9ZK4 QTC K

278 87 29 1935 278 = 153 =

30126 06062 06062 00156 00426 01056 01398 01258 01416 01528

02079 02125 02248 02428 02574 03115 03250 03294 03463 04206

04318 04598 05151 05162 05320 05421 05533 06477 06589 07018

07164 07254 07401 08323 08468 06491 09032 09111 09278 09548

09571 10168 10494 11002 11136 11226 11361 12014 12362 12496

13149 13442 14049 14072 14230 14353 14511 15321 15499 15523

16073 16210 16377 17200 17356 17402 17446 18098 18201 18313

18324 19099 19224 20002 20147 20574 21104 21351 21520 22442

22598 23239 23296 23319 23443 29085 K

W6N8 R 278 K

**2545.5 kHz, 29-12, 1838 UTC, logged by André**

9ZK4 QTC K

284 99 29 2000 284 = 153 =

30126 02024 02024 00011 00077 01090 01124 01382 01405 04453  
04497 05050 05083 05184 05218 05230 05241 05296 05320 05421  
05476 05533 05577 06219 06253 06286 06354 06589 07018 07221  
07243 07254 07298 09087 09111 10124 10108 10203 10258 10506  
10551 11585 12036 12249 12261 12339 12384 12519 12520 13419  
13453 14050 14072 14319 1444x 14375 14443 15039 15062 15231  
15275 16074 16108 16164 16209 16524 16558 17053 17110 17413  
17448 17503 17547 18076 18098 18099 18177 18334 18256 18481  
18537 19134 19156 19550 19583 20516 20541 21014 21038 21334  
21440 21xxx 22318 22339 22439 23195 23274 29097 K

Note the rising groups. I haven't seen this before. Additional info is very welcome.



*M32a*  
*Russian Navy*  
*Voyenno-Morskoy Flot Rossii*

**12631 kHz, 03-12**

0950 UTC U U U XXX XXX RGT77 RGT77 20872 46310 GIDRATAZA 7138 0151 K  
0957 UTC XXX XXX RDL RDL 96818 87596 ZUWELXKA 2154 2873 K  
1003 UTC XXX RDL RDL RDL 48200 47847 ...

1122 UTC RDL RDL RDL 18664 16208 18664 16208 18664 16208 K

**Note:** This kind of message commands the receiving stations to change the One Time Pad container immediately. 18664 is the number of the used container, 16208 is the number of the new container. The next message will be encrypted with the new container's first unit.

**4797 kHz, 06-12, 1903 UTC**

RHQ2 DE RAL2 K  
DE ? K  
QSA 2 QRU VA  
RBL66 DE RAL2 K  
RMW2 RMW2 RMW2 DE RAL2 RAL2 K  
RAL2 DE RMW2 QSA 1 AA NO ?  
QSA 1 AA NO QRU VA  
QRU VA  
RBL66 RBL66 RBL66 DE RAL2 RAL2 K  
DE RBL66 QSA 1 K  
DE ? K  
DE RBL66 RBL66 QSA 1 K  
QSA 1 AA NO QRU VA  
QRU SK

2013 kHz, 01-12, 1848 UTC  
2776 kHz, 03-12, 0530 UTC  
3395.5 kHz, 05-12, 0345 UTC  
3500.5 kHz, 03-12, 1857 UTC  
3762 kHz, 06-12, 0314 UTC

3805 kHz, 08-12, 0632 UTC  
3862 kHz, 10-12, 1811 UTC  
4341 kHz, 11-12, 0630 UTC

RMP QTC for REO in Bcast  
RKZ RCV QTC 401 14 3 0650 401 = SML = PRO +TOROE ORDS .. MORE ... NR 98  
RCV comms checks with RFH77  
RCP de RJD56 QTC 223 18 3 1635 223 = OPOWEQENIE NN 1530 SEVEINE 65 ...  
RJP99 comms checks ...662 17 6 601 662 = FOR RJH74 RJH45 = 06031 99715 10396 41/98  
91610 10026 49728 55014 70271 22252 00040 20301 330// 40402 06014 = AR RJP99  
RJD69 comms checks with RJ152  
RMW32 comms checks with outstation RMW46, RMW44  
RMW32 comms checks with outstations

4521 kHz, 07-12, 1534 UTC	RMP comms checks with RHC86
4855 kHz, 08-12, 1015 UTC	XXX RLO WETER 3 PO RAJONAM 673 674 675 676 677 K
4940 kHz, 01-12, 0453 UTC	RIQ88 comms checks with RAI62, RAI63
5131.5 kHz, 03-12, 1232 UTC	RMP comms checks with RHC86, RLD64, RFK99
5224 kHz, 04-12, 0515 UTC	RCV comms checks with RIP90, RBE86, RGX94, RCIV, RJV in Bcast
5232 kHz, 03-12, 1500 UTC	RMP comms checks with RLD64
5383.5 kHz, 02-12, 1515 UTC	RJD69 comms checks with RJC30
5810 kHz, 04-12, 0603 UTC	RMW56 comms checks with RGT49, RJV63, RGT36
5916 kHz, 03-12, 1956 UTC	RIC87 RIC87 DE RCV QTC 108 81 3 2312 108 =
6290 kHz, 06-12, 0305 UTC	RBES comms checks with RIT
6860 kHz, 11-12, 0601 UTC	RMW56 comms checks with RGT49, RJV63, RGT36
6881 kHz, 08-12, 0801 UTC	RGT77 = 726 = PPPPEVCEH RchFJY ÂSAYX WWÛAT ÂEJWC YMNUK SUTGB XKDÔG MBLTÛ EVCEH RchFJY PIPÂW = K
8460 kHz, 03-12, 0755 UTC	RMP QTC for REO in Bcast
10540 kHz, 01-12, 1102 UTC	RIW comms checks with RCRE
3692.5 kHz, 14-12, 0641 UTC	XXX RMU51 WETER 3 PO RAJONAM 572 682 684 686 .....
5745 kHz, 14-12, 0949 UTC	STROGHI (RJC30) comms checks with VESTNIK (RMP)
7566 kHz, 28-12, 1804 UTC	XXX RJV 35873 DESETNIK 9796 9871 K
4043 kHz, 30-12, 1901 UTC	XXX LR43 49631 NITOÔNÏY 4940 9004 K

### 3692.5 kHz

01-12, 0510 UTC	RJD99 comms checks with RAS82, RAY85, RBC89, RBE99, RJI70, RJI92, RMJW
01-12, 1502 UTC	RJD99 comms checks with RAS82, RAY85, RBC89, RBE99, RJI70, RJI92, RMJW
10-12, 1515 UTC	RMU de RJD99 QTC 960 80 10 1630 960 POGO
10-12, 1805 UTC	RJD99 comms checks with RHN88

### 3875.5 kHz, 11-12

0531 UTC	RJD99 comms checks and QTC with RHN88
0554 UTC	RJD99 comms checks and QTC with RHN88
0604 UTC	RJD99 comms checks and QTC with RHN88
0705 UTC	RJD99 comms checks and QTC with RHN88 and RCQE

### 3877.5 kHz

06-12, 1804 UTC	RJD52 de RBGR 931 17 6 2101 931 = FM RBGR FOR RJD52 RJD88 = 06181 99441 10480 42/97 92907 10050 40307 54000 700?? 89/// 22242 00080 88000 80000 06014 = AR RBGR K
10-12, 1851 UTC	RJD52 comms checks with RBEP
01-12, 1855 UTC	RJD52 comms checks with RBEP

### 4297 kHz

10-12, 1325 UTC	RMP comms checks with RJK99
10-12, 1522 UTC	RFK99 de RMP QSU 1 QSX5063 QWH 4042
03-12, 1357 UTC	RMP comms checks with RLD64

### 4635 kHz

04-12, 0452 UTC	RBE99 comms checks with RJD99
02-12, 0604 UTC	RBE99 comms checks with RJD99
02-12, 1834 UTC	RBE99 comms checks with RJD99
03-12, 1904 UTC	RBE99 comms checks with RJD99

### 4810 kHz, 14-12, 1251 UTC

RMU51 de RMAE 527 21 14 1535 527 =  
KZCMF WDChHch TPZGZ WEQKN QÂURU YSIEI VYÔQL PSJEI ORIDI AULZK EQCNR FCBÛB OEWCN JLFCQ ÔYCZK ZKVIÔ WDBGT  
ÛAYÂO LQVBÛ BGAWT ÂRPWP =  
RPT AL QLN AR RMAE K

**4940.5 kHz, 14-12, 1654 UTC, RIQ88 wkg RAI62**

RIQ88 de RAI63 QSA 1 QTC 26 =

8303 1700 811 419 1800 812 423 1900 872 418 2000 864 419 = 8301 2000 840 420 = K

RIQ88 de RAI63 = RPT = FM RAI62 = 26 =

8303 1700 0896 1800 0896 1900 0895 2000 0895= 8301 2000 0896 K



**M32c**  
**Russian Air Force**  
**Voyenno-vozdushnye sily Rossii**

**4649 kHz, 11-12**

0730 UTC XXX 1QRF 88792 PROSNA 3142 8162 MONONITX 6937 4423 K

0734 UTC XXX 1QRF 03573 MOKOWEN 7903 7312 OSOKOWYJ 4033 9295 K

0739 UTC XXX 1QRF 16820 TRANSEPT 71186062 STEPOLAZ 0324 7384 K

0744 UTC XXX 1QRF 81998 STALXKA 6845 4890 GRANATA 9727 1876 POZDNIJ 7118 6095 NORDIT 7056 7401 K

0749 UTC XXX JUE4 60378 USILITELX 4560 0430 K

0752 UTC XXX 1QRF 41537 GREÔKA 9865 6528 K

0754 UTC XXX 1QRF 48976 IBOLNIEC 8128 2794 BOMBOMER 8664 3052 ITAJNÂ 3027 1620 STOÂLYJ 5119 6746 K

0759 UTC XXX 1QRF 93913 SPANX 2306 0997 K

0801 UTC XXX 1QRF 42665 WOLXERNYJ 9865 2436 TROAKAR 2305 2060 K

0804 UTC XXX 1QRF 99915 BRYVEJKA 4203 2653 K

0807 UTC XXX 1QRF 34107 ÉRGOBAZIN 4347 2164 K

0817 UTC 1QRF 59396 KRAWMALXTIT 4203 8644 PRchiWOJ 9481 2859 POSTZTOK 6184 2093 K

**2737 kHz, 28-12**

1623 UTC XXX 1QRF 80592 TRILISTNIK 3528 2782 K

1630 UTC XXX 1QRF 8 06929 MOROZOBOIN 4478 5201 K

1751 UTC XXX 1QRF 09303 ÉTILGEKSEN 4370 5809 K

1757 UTC XXX 1QRF 51461 ÉTIOKARMID 8529 5674 K

**LOGS SECTION**

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
---	4850	8-12	1903	Tue	RTK DE RDI QSA 3 QRM QSA ? K. OK 3515 K	CW	(JPL-Sib)
---	4852	6-12	2017	Sun	VV S9RR DE CO7G K. VV LNW9 DE CO7G K K	CW	(JPL-Sib)
---	6985	15-3	1425	Sun	Unid clg 20 4 in Russian for at least 9 minutes	LSB	(qsr711)
---	10470	4-12	0129	Fri	VVV ROZ ROZ CQ CQ CQ CQ CQ CQ CQ DE YRM YRM VVV QSV K	CW	(JPL-Sib)
---	10470	6-12	0129	Sun	VVVV CQ DE YRM YRM QSV K QSV K HOI (Other station) DE 4ON VOR ZNN VA VOR VOR ZNN VA	CW	(JPL-Sib)
---	10470	10-12	0130	Thu	VVV VVV VVV ROZ ROZ ROZ VVVV CQ CQ CQ CQ DE YRM YRM YRM VVV ROZ ROZ ROZ DE XRJ ZNN VA	CW	(JPL-Sib)
---	10470	11-12	0131	Fri	YRM YRM YRM VVV QSV K. VVV ROZ ROZ DE DE ROZ QSV K. DE VOR VOR KLF KLF R	CW	(JPL-HK)
---	10470	13-12	0131	Sun	VVV CQ (x3) DE YRM VVV CQ (x3) DE YRM (x3) ZAN ZAN VA I	CW	(JPL-HK)
---	10470	15-12	0130	Tue	VVV CQ DE YRM QSV K. V KLF KLF R ZNN R VA VVV CQ DE YRM ZAN ZAN VA I	CW	(JPL-HK)
---	10470	16-12	0130	Wed	VVV KLF CQ DE YRM VVV QSV K. XRJ DE XRJ XRJ R ZNN ZNN VA QSV K. CQ DE YRM VVV QSV K	CW	(AB)
---	10755	22-12	1007	Tue	975 975 975 45687 45687 975 975 975 45688 45688 (R4) 00000	CW	(Danix)
---	10755	22-12	1234	Tue	... 50798 68528 86234 42404 68609 53755 56982 72432 33203 94201 43999 = 000 000 30 30 00000	CW	(MPJ)
---	10755	22-12	1300	Tue	975 975 975 45678 (R4) 000 000 30 30 = = 83625 92883 20091 ... stops at 1317 UTC. Starts again and stops suddenly at 1324 UTC	CW	(JkC/MPJ)
---	10755	22-12	1348	Tue	975 975 975 45678 (R4) 000 000 30 30 = = 83625 92883 20091 ... stops	CW	(JkC)
---	10755	22-12	1406	Tue	975 975 975 45678 (R4) 000 000 30 30 = = 83625 92883 20091 ... stops at 1418 UTC	CW	(JkC)
---	10755	23-12	0825	Wed	975 975 975 45687 (R4) 000 000 30 30 = = 83625 83625 92883 92883 20091 200 End of transmission	CW	(Danix)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
---	10755	23-12	0832	Wed	975 975 975 45687 (R4) 000 000 30 30 = = 83625 83625 92883 92883 ... 16205 38301 38301 = = 000 000 30 30 00000. Sent only 29 groups.	CW	(Danix)
---	10755	24-12	0805	Thu	975 (R4)	CW	(AB)
---	10755	24-12	1048	Thu	975 975 975 12345 (R) long tone 83625 92883 stops, then 18074 43411 31911, then 975 875 975 12345 (R) 975 975 975 00000 (R) 975 975 975 (R4)	CW	(AB)
---	10755	25-12	0740	Fri	975 45687 000 30	CW	(Danix)
---	2518	15-12	2010	Tue	Unid repeating 730 730 730 27247 27247	CW	(PPA)
ARM	6450	9-12	1022	Wed	Armenian Air Defense	USB	(AB-ISR)
DPRK	10500	12-12	1452	Sat	N. Korean diplo	DPRK ARQ/600/600 LSB	(PPA)
DPRK	16855	30-12	1339	Wed	MFA, Pyongyang (QX 17320 kHz)	DPRK-ARQ 1200/1200 LSB	(MCO)
DPRK	17320	30-12	1341	Wed	North Korean Embassy (QX 16855 kHz)	DPRK-ARQ 1200/1200 LSB	(MCO)
DPRK	20250	2-12	1408	Wed	North Korean Embassy, Havana	DPRK-ARQ 600/600 LSB	(MCO)
E06	4496	7-12	1830	Mon	910 873 61 23123 22400 89905 ... 05375 42566 82271 873 61 00000	USB	(Danix/F5JBR)
E06	4496	14-12	1830	Mon	910 452 66 89741 60598 36201 ... 03905 39404 76797 452 66 00000	USB	(AB)
E06	4836	3-12	2030	Thu	321 569 20 14259 22676 32782 32782 76723 ... 12256 18841 73311 98089 12250 569 20 00000	USB	(MPJ)
E06	4836	17-12	2030	Thu	321 569 20 14259 22676 32782 32782 76723 ... 12256 18841 73311 98089 12250 569 20 00000	USB	(MPJ)
E06	6792	7-12	1800	Mon	910 873 61 23123 22400 89905 ... 05375 42566 82271 873 61 00000	USB	(Danix)
E06	6792	14-12	1800	Mon	910 452 66 89741 60598 36201 ... 03905 39404 76797 452 66 00000	USB	(AB)
E06	14575	4-12	0600	Fri	923 487 105 18230 87950 58099 ... 30717 87870 75450 487 105 00000	USB	(AB)
E06	14575	17-12	0600	Thu	923 487 105 18230	USB	(HFD)
E06	17420	3-12	0714	Thu	i.p. 76563 06832 94066 61775 ... 30717 87870 75450 487 487 105 105 00000	USB	(F5JBR)
E06	17420	4-12	0700	Fri	923 487 105 18230 87950 58099 ... 30717 87870 75450 487 105 00000	USB	(AB)
E06	17420	4-12	0710	Fri	ip	USB	(HFD)
E06	17420	17-12	0700	Thu	923 487 105 18230 87950 58099 ... 30717 87870 75450 487 105 00000	USB	(AB)
E06	17420	17-12	0700	Thu	923	USB	(HFD)
E06	17420	18-12	0700	Fri	923 487 105 18230 87950 58099 ... 30717 87870 75450 487 105 00000	USB	(AB)
E07	4564	2-12	1840	Wed	485 1	AM	(HFD)
E07	4564	6-12	1840	Sun	485 1 880 184 45645 368.3 9324. 44834 02015 ...	AM	(MPJ)
E07	4564	20-12	1820	Sun	485 1 Unreadable	AM	(MPJ)
E07	4564	23-12	1840	Wed	485 1 683 37 86932 79859 28842 ... 86088 13470 97541 000 000	AM	(AB)
E07	5278	14-12	2040	Mon	472 1 136 48 02638 44184 09070 ... 01543 28149 54764 000 000	AM	(AB)
E07	5278	23-12	2040	Wed	472 1 300 72 70026 82904 32741 ... 41528 73532 84500 000 000	AM	(AB/MPJ)
E07	5278	28-12	2040	Mon	472 1 505 75 04837 924.0 96799 16125 80158 ... 838.. 06869 60306 87245 87245 000 000	AM	(MPJ)
E07	5278	30-12	2040	Wed	472 505 75 04837 92480 96799 ... 06869 80306 87245 000 000	USB	(AB)
E07	5278	30-12	2040	Wed	472 1 505 75 04837 .2480 96799 16725 80158 ...	AM	(MPJ)
E07	5449	3-12	2130	Thu	744 744 744 000	AM	(AB)
E07	5449	10-12	2130	Thu	744 744 744 000	AM	(AB)
E07	5449	17-12	2130	Thu	744 744 744 000	USB	(AB)
E07	5864	2-12	1820	Wed	485 1 880 164 45645	AM	(HFD)
E07	5864	23-12	1820	Wed	485 1 683 37 86932 79859 28842 ... 86088 13470 97541 000 000	AM	(AB)
E07	5864	30-12	1820	Wed	485 485 485 000	AM	(AB)
E07	6777	10-12	2110	Thu	744 744 744 000	AM	(AB)
E07	6778	2-12	2020	Wed	472 472 472 000	AM	(HFD)
E07	6778	14-12	2020	Mon	472 1 136 48 02638 44184 09070 ... 01543 28149 54764 000 000	AM	(AB)
E07	6778	23-12	2020	Wed	472 1 300 72 70026 82904 32741 ... 41528 73532 84500 000 000	AM	(AB)
E07	6778	30-12	2020	Wed	472 505 75 04837 92480 96799 ... 06869 80306 87245 000 000	USB	(AB)
E07	6778	30-12	2020	Wed	472 1 505 75 04837 .2480 96799 16725 80158 ...	AM	(MPJ)
E07	7464	23-12	1800	Wed	485 1 683 37 86932 79859 28842 ... 86088 13470 97541 000 000	AM	(AB)
E07	7464	30-12	1800	Wed	485 485 485 000	AM	(AB)
E07	7478	2-12	2000	Wed	472 472 472 000	AM	(HFD)
E07	7478	14-12	2000	Mon	472 1 136 48 02638 44184 09070 ... 01543 28149 54764 000 000	AM	(AB/MPJ)
E07	7478	23-12	2000	Wed	472 1 300 72 70026 82904 32741 ... 41528 73532 84500 000 000	AM	(AB)
E07	7478	30-12	2000	Wed	472 505 75 04837 92480 96799 ... 06869 80306 87245 000 000	USB	(AB)
E07	8123	5-12	0700	Sat	134 134 134 000	USB	(AB)
E07	8123	9-12	0700	Wed	134 134 134 000	USB	(AB)
E07	8123	9-12	0700	Wed	134 134 134 000	AM	(HFD)



Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
E07	8123	16-12	0700	Wed	134 134 134 000	USB	(AB)
E07	8123	19-12	0700	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	8123	26-12	0700	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	8123	30-12	0700	Wed	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	9323	5-12	0720	Sat	134 134 134 000	USB	(AB)
E07	9323	9-12	0720	Wed	134 134 134 000	USB	(AB/HFD)
E07	9323	16-12	0720	Wed	134 134 134 000	USB	(AB)
E07	9323	19-12	0720	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	9323	26-12	0720	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	9323	30-12	0720	Wed	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	10423	19-12	0740	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	10423	26-12	0740	Sat	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	10423	30-12	0740	Wed	134 1 123 42 29216 50219 68239 ... 55578 26510 73992 000 000	USB	(AB)
E07	5864	27-12	1820	Sun	485 485 485 000	AM	(MPJ)
E07a	4577	2-12	2140	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	4577	16-12	2140	Wed	825 1 11602 7516 71 98360 44321 13357 ... 43180 58168 51548 000 000	USB	(AB)
E07a	5087	11-12	1650	Fri	830 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB/MPJ)
E07a	5111	3-12	0530	Thu	189 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	5111	3-12	0530	Thu	189 1 17673 7104 79 79147	USB	(HFD)
E07a	5277	2-12	2120	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	5277	16-12	2120	Wed	825 1 11602 7516 71 98360 44321 13357 ... 43180 58168 51548 000 000	USB	(AB)
E07a	5387	4-12	1630	Fri	830 830 830 000	USB	(AB/MPJ/HFD)
E07a	5387	11-12	1630	Fri	830 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB/MPJ)
E07a	5811	3-12	0550	Thu	189 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB/HFD)
E07a	5811	10-12	0550	Thu	189 189 189 000	USB	(AB)
E07a	5877	2-12	2100	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	5877	16-12	2100	Wed	825 1 11602 7516 71 98360 44321 13357 ... 43180 58168 51548 000 000	USB	(AB)
E07a	5877	23-12	2100	Wed	825 825 825 000	USB	(MPJ)
E07a	5887	4-12	1610	Fri	830 830 830 000	USB	(AB/GHn/MPJ/HFD)
E07a	5887	11-12	1610	Fri	830 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB/MPJ)
E07a	6911	3-12	0610	Thu	189 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB/HFD)
E07a	9445	9-12	0851	Wed	i.p. 58624 00495 000 000	USB	(AB)
E07a	11121	5-12	0900	Sat	124 124 124 000	USB	(AB/HFD)
E07a	11121	12-12	0900	Sat	124 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB)
E07a	11121	26-12	0900	Sat	124 124 124 000	USB	(AB)
E07a	12221	5-12	0920	Sat	124 124 124 000	USB	(AB/HFD)
E07a	12221	12-12	0920	Sat	124 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB)
E07a	12221	26-12	0920	Sat	124 124 124 000	USB	(AB)
E07a	13421	12-12	0940	Sat	124 1 17077 8484 83 46613 47949 59339 ... 71797 76717 25229 000 000	USB	(AB)
E11	4505	1-12	1605	Tue	232/00	USB	(AB)
E11	4505	6-12	1605	Sun	232/00	USB	(AB/MPJ)
E11	4505	8-12	1605	Tue	232/00	USB	(AB/MPJ)
E11	4505	15-12	1605	Tue	232/00	USB	(MPJ)
E11	4505	20-12	1605	Sun	232/00	USB	(AB/MPJ)
E11	4505	29-12	1605	Tue	232/00	USB	(AB/MPJ)
E11	5082	3-12	1730	Thu	416/00	USB	(AB)
E11	5082	24-12	1730	Thu	416/00	USB	(AB)
E11	5082	31-12	1730	Thu	416/00	USB	(AB)
E11	5409	3-12	1530	Thu	262/00	USB	(AB/MPJ)
E11	5409	24-12	1530	Thu	262/00	USB	(AB)
E11	5779	3-12	0315	Thu	253/00	USB	(AB)
E11	6940	24-12	0820	Thu	438/00	USB	(AB)
E11	6940	28-12	0820	Mon	438/00	USB	(AB/KK2)
E11	6949	21-12	0820	Mon	438/00	USB	(AB)
E11	7840	1-12	0645	Tue	517/00	USB	(AB)
E11	7840	3-12	0645	Thu	517/00	USB	(AB)
E11	7840	8-12	0645	Tue	517/00	USB	(AB)
E11	7840	10-12	0645	Thu	517/00	USB	(AB)
E11	7840	24-12	0645	Thu	517/00	USB	(AB)
E11	7840	29-12	0645	Tue	517/00	USB	(AB)
E11	7840	31-12	0645	Thu	517/00	USB	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
E11	7984	23-12	1205	Wed	469/00	USB	(AB)
E11	7984	29-12	1205	Tue	469/00	USB	(AB)
E11	9443	2-12	1705	Wed	392/00	USB	(AB/MPJ)
E11	9443	5-12	1705	Sat	392/00	USB	(MPJ)
E11	9443	9-12	1705	Wed	392/00	USB	(MPJ)
E11	9446	4-12	0830	Fri	649/00	USB	(AB)
E11	9446	7-12	0900	Mon	534/00	USB	(AB)
E11	9446	9-12	0900	Wed	534/00	USB	(AB)
E11	9446	14-12	0830	Mon	649/00	USB	(AB)
E11	9446	14-12	0900	Mon	534/00	USB	(AB)
E11	9446	16-12	0900	Wed	534/00	USB	(AB)
E11	9446	18-12	0830	Fri	649/00	USB	(AB)
E11	9446	21-12	0830	Mon	649/00	USB	(AB)
E11	9446	21-12	0900	Mon	534/00	USB	(AB)
E11	9446	28-12	0830	Mon	649/00	USB	(AB)
E11	9950	3-12	0930	Thu	270/00	USB	(AB)
E11	9950	9-12	0930	Wed	270/00	USB	(AB)
E11	9950	10-12	0930	Thu	270/00	USB	(AB)
E11	9950	17-12	0930	Thu	270/00	USB	(AB)
E11	9950	24-12	0930	Thu	270/00	USB	(AB)
E11	10125	3-12	0820	Thu	436/38 Attention 86939 95930 27437 ... 49997 22538 82964 Attention, rpt msg, out	USB	(AB)
E11	10125	7-12	0820	Mon	436/38 Attention 86939 95930 27437 ... 49997 22538 82964 Attention, rpt msg, out	USB	(AB)
E11	10125	10-12	0820	Thu	438/00	USB	(AB)
E11	10213	7-12	0745	Mon	262/00	USB	(AB)
E11	10213	14-12	0745	Mon	261/38 Attention 63200 11033 29591 ... 24594 67334 52779 Attention, rpt msg, out	USB	(AB)
E11	10213	21-12	0745	Mon	262/00	USB	(AB)
E11	10213	28-12	0745	Mon	262/00	USB	(AB)
E11	10428	6-12	0805	Sun	311/00	USB	(AB)
E11	10429	13-12	0805	Sun	315/34 Attention 50346 33156 72195 ... 28710 92926 27019 Attention, rpt msg, out	USB	(AB)
E11	10429	16-12	0805	Wed	311/00	USB	(AB)
E11	10429	27-12	0805	Sun	311/00	USB	(AB)
E11	10429	30-12	0806	Wed	311/00	USB	(PPA)
E11	10448	2-12	1625	Wed	972/00	USB	(GHn/MPJ)
E11	10448	6-12	1625	Sun	972/00	USB	(MPJ)
E11	10448	9-12	1625	Wed	972/00	USB	(MPJ)
E11	10448	20-12	1725	Sun	972/00	USB	(MPJ)
E11	10448	30-12	1625	Wed	972/00	USB	(MPJ)
E11	10800	8-12	0710	Tue	633/00	USB	(AB)
E11	10800	11-12	0710	Fri	633/00	USB	(AB)
E11	10800	15-12	0710	Tue	633/00	USB	(AB)
E11	10800	18-12	0710	Fri	633/00	USB	(AB)
E11	10800	29-12	0710	Tue	633/00	USB	(AB)
E11	11100	1-12	1205	Tue	469/00	USB	(AB)
E11	11107	20-12	2005	Sun	363/00	USB	(HFD)
E11	12153	1-12	1045	Tue	576/00	USB	(AB)
E11	12153	8-12	1045	Tue	574/36 Attention 92135 14197 58310 ... 56124 14137 45508 Attention, rpt msg, out	USB	(AB)
E11	12153	22-12	1045	Tue	576/00	USB	(AB)
E11	12153	29-12	1045	Tue	576/00	USB	(AB)
E11	12924	10-12	0710	Thu	496/39 Attention ..	USB	(AB)
E11	12924	17-12	0710	Thu	491/00	USB	(AB)
E11	12924	26-12	0710	Sat	491/00	USB	(AB)
E11	12924	31-12	0710	Thu	491/00	USB	(AB)
E11	13046	21-12	0600	Mon	187/00	USB	(AB)
E11	14666	8-12	1345	Tue	911/00	USB	(AB/MPJ)
E11	14666	15-12	1345	Tue	911/00	USB	(AB/MPJ)
E11	14666	22-12	1345	Tue	911/00	USB	(AB/GHn)
E11	14666	29-12	1345	Tue	911/00	USB	(MPJ)
E11	15632	7-12	1540	Mon	226/00	USB	(AB)
E11	15632	14-12	1540	Mon	228/00	USB	(AB)
E11	16112	1-12	0745	Tue	335/00	USB	(AB)
E11	16112	3-12	0745	Thu	335/00	USB	(AB)
E11	16112	8-12	0745	Tue	335/00	USB	(AB)

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E11	16112	10-12	0745	Thu	335/00	USB	(AB)
E11	16112	11-12	0730	Fri	352/00	USB	(AB)
E11	16112	13-12	0730	Sun	352/00	USB	(AB)
E11	16112	17-12	0745	Thu	335/00	USB	(AB)
E11	16112	18-12	0730	Fri	352/00	USB	(HFD)
E11	16112	18-12	0730	Fri	352/00	USB	(AB)
E11	16112	31-12	0745	Thu	335/00	USB	(AB)
E11	18030	2-12	1300	Wed	133/00	USB	(MPJ)
E11	18030	29-12	1300	Tue	133/00	USB	(MPJ)
E11	18030	30-12	1300	Wed	133/00	USB	(GHn/MPJ)
E11a	5082	10-12	1738	Thu	i.p. ... 07761 00895 85122 59565 00809	USB	(MPJ)
E11a	6940	17-12	0820	Thu	438/36 Attention 43830 88156 14268 ... 83028 02932 32272 Attention, rpt msg, out	USB	(Danix)
E11a	7840	17-12	0645	Thu	514/34 Attention 08235 04070 ... 26707 79645 52209 Attention, rpt msg, out	USB	(AB)
E11a	9443	16-12	1705	Wed	390/38 Attention 47020 20089 38466 45112 54994 ... 67854 31083 82685 81868 40101	USB	(MPJ)
E11a	9443	19-12	1705	Sat	390/38 Attention 47020 20089 38466 ... 82685 81868 40101 Attention, rpt msg, out	USB	(AB)
E11a	9446	7-12	0830	Mon	643/39 Attention 86558 37165 08374 ... 89059 09549 09100 Attention, rpt msg, out	USB	(AB)
E11a	9446	11-12	0830	Fri	643/39 Attention 46558 37165 08374 ... 89059 09549 09100 Attention, rpt msg, out	USB	(AB)
E11a	9446	30-12	0900	Wed	534/31 Attention 24991 30932 27484 ... 54792 29294 01374 Attention, rpt msg, out	USB	(AB/F5JBR)
E11a	9950	30-12	0930	Wed	375/32 Attention 81892 71495 39630 67455 36305 ... Attention, rpt msg, out	USB	(AB)
E11a	9950	31-12	0930	Thu	275/32 Attention 81892 71495 39630 67455 ... 97444 91593 87312 Attention, rpt msg, out	USB	(AB)
E11a	10429	9-12	0805	Wed	315/34 Attention 50346 33156 72195 ... 28710 92926 27019 Attention, rpt msg, out	USB	(AB)
E11a	10448	23-12	1625	Wed	972/32 Attention 71990 02064 47993 ... 70116 44106 24253 Attention, rpt msg, out	USB	(AB)
E11a	10800	1-12	0710	Tue	631/39 Attention 28815 54112 90238 ... 69237 19419 38510 Attention, rpt msg, out	USB	(AB)
E11a	10800	4-12	0710	Fri	631/39 Attention 28815 54112 90238 ... 69237 19419 38510 Attention, rpt msg, out	USB	(AB)
E11a	11100	9-12	1205	Wed	465/36 Attention 42985 52090 07945 ... 68697 75721 99199 Attention, rpt msg, out	USB	(AB/MPJ)
E11a	13046	7-12	0600	Mon	185/31 Attention 09672 05126 29890 ... 08444 91053 27136 Attention, rpt msg, out	USB	(AB)
E11a	14666	1-12	1345	Tue	912/34 Attention 17006 96384 68907 ... 99359 06159 37264 Attention, rpt msg, out	USB	(AB)
E11a	14666	5-12	1345	Sat	912/34 Attention 17006 96384 68907 ... 99359 06159 37264 Attention, rpt msg, out	USB	(AB/MPJ)
E11a	16112	24-12	0745	Thu	331/32 Attention 47958 56104 25062 ... 54650 94051 83494 Attention, rpt msg, out	USB	(AB)
E11a	16112	27-12	0730	Sun	353/38 Attention 01918 54866 40845 ... 39977 83333 72675 Attention, rpt msg, out	USB	(AB)
E11a	4505	27-12	1605	Sun	235/33 Attention 29589 15432 27214 22227 46638 ... 18299 41516 49061 26071 05855	USB	(MPJ)
E17z	9820	3-12	0810	Thu	674 802 5 39394 35083 43571 33785 37331 802 5 00000	USB	(AB)
E17z	9820	3-12	0810	Thu	674 802 5 39394 35083 42571 33785 37331 802 5 00000	USB	(AnEur)
E17z	9820	10-12	0810	Thu	674 820 5 39394 35083 42571 32785 37331 820 5 00000	USB	(AB)
E17z	9820	17-12	0810	Thu	674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000	USB	(AB)
E17z	9820	24-12	0811	Thu	674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000. 1 minute late. Signal off at 0813 UTC, restarts a few seconds later.	USB	(AB)
E17z	9820	31-12	0800	Thu	674 674 674 00000	USB	(AB)
E17z	11170	3-12	0800	Thu	674 802 5 39394 35083 43571 33785 37331 802 5 00000	USB	(AB)
E17z	11170	3-12	0800	Thu	674 802 5 39394 35083 42571 33785 37331 802 5 00000	USB	(AnEur)
E17z	11170	10-12	0800	Thu	674 820 5 39394 35083 42571 32785 37331 820 5 00000	USB	(AB)
E17z	11170	17-12	0800	Thu	674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000	USB	(AB)
E17z	11170	24-12	0800	Thu	674 925 8 46399 33972 30172 93302 50111 29250 85837 32062 925 8 00000	USB	(AB)
E17z	11170	31-12	0800	Thu	674 674 674 00000	USB	(AB)
E22	7140	24-12	2205	Thu	This is Hotel Bravo 5	AM	(Danix)
E22	15020	23-12	1305	Wed	DC6. "This is Delta Charlie 6" repeated //17387 kHz	AM	(AB)
E22	17387	23-12	1000	Wed	TK8. "This is Tango Kilo 8" repeated for 5 minutes	AM	(AAI)
E22	17387	23-12	1100	Wed	EV2. "This is Echo Victor 2" repeated	AM	(AAI)
E22	17387	23-12	1305	Wed	DC6. "This is Delta Charlie 6" repeated //15020 kHz	AM	(AB)
E25	6140	2-12	0820	Wed	Distorted Arabic music. Two different pieces. Ends abruptly 5 minutes later with the transmitter switching off.	AM	(qsr711)
E25	6140	2-12	0840	Wed	169 Message(x3) 0144 8230 1715 7708 9599 3653 2006 Rebeat(x3) [Msg repeat] EOM EOT. Many windows XP sounds before the transmission, popup sound, error sounds and click sound. No song intro	AM	(qsr711)
E25	6140	3-12	0830	Thu	Repeat of 02 Dec. No song intro used.	AM	(qsr711)
E25	6140	5-12	1035	Sat	Carrier on and off since 0900z. Live male voice. Test counts at 1035z slightly off freq. 3 counts, then off.	USB	(qsr711)
E25	6140	9-12	0848	Wed	169 Message(x3) 1145 5490 4518 0838 0657 3601 6456 Beat Beat Rebeat [Msg repeat] EOM. Windows xp shutdown sound at the end. No song intro used.	AM	(qsr711)
E25	6140	10-12	0840	Thu	Repeat of 9 Dec. No song intro used.	AM	(qsr711)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrl
E25	6140	13-12	0808	Sun	Tests, same male voice. 3 counts, then off.	AM	(qsr711)
E25	9555	23-12	1221	Wed	Test	AM	(qsr711)
E25	9600	23-12	0905	Wed	Test tone for 2 minutes, Arabic music, test tone, then off.	AM	(qsr711)
E25a	9400	8-12	1115	Tue	Probably a test. Music only: Uum Kulthum-Arouh Limin.	AM	(qsr711)
E25a	9450	6-12	1212	Sun	Intro song: Umm Kulthum - Enta Omri. Callup: 837 6. Ended 1218 UTC: Message (x3), Rebeat (x2) Eat, EOM, EOT	AM	(Danix/qsr711)
E25a	9450	8-12	1206	Tue	Intro music. Female voice: 830 6 (repeated) Message, Message, Message followed by a Windows XP sound	AM	(qsr711)
EGY	9045	2-12	1918	Wed	MFA Cairo clg selcall TVXQ into CODAN 16 tone modem traffic	Sitor-A 100/170	(PPA)
EGY	9078.7	17-12	0030	Thu	Egyptian embassy Havana wkg MFA Cairo in clear English	SITOR-A 100/170	(MCO)
EGY	9089.7	17-12	0030	Thu	MFA Cairo wkg embassy Havana in clear English	SITOR-A 100/170	(MCO)
EGY	11065	31-12	2330	Thu	Egyptian diplo: OKDS JG KDCFUSG 6609 JG KYCIWZ 6609, then QSY to 9066 in SITOR-A	SITOR-B 100/170	(Danix)
EGY	20086.7	21-12	1507	Mon	Egyptian Embassy, Bamako hex offline crypto to 71: MFA	SITOR-A 100/170	(MCO)
G06	3728	7-12	1658	Mon	Early start. 248 (R) 111 88 91299 96449 14155 ... 35643 66827 62228 111 88 00000. Contains errors	USB	(AB)
G06	3728	14-12	1700	Mon	248 111 88 91299 96449 14155 31592 44788 ... 04966 99383 35643 66807 60208 111 88 00000	USB	(MPJ/HFD)
G06	4460	24-12	1300	Thu	329 329 329 00000	USB	(AB)
G06	4484	7-12	1754	Mon	Test: 111 22222 6 111 22222	USB	(AB)
G06	4484	7-12	1757	Mon	3 minutes early. 248 (R) 111 88 91299 96449 14155 ... 35643 66827 62228 111 88 00000. Contains errors	USB	(AB/F5JBR)
G06	4484	14-12	1737	Mon	Heard ending 1700/3728 kHz sked on this 1800 sked freq: ... 111 00000.	USB	(MPJ)
G06	4484	14-12	1800	Mon	248 111 88 91299 96449 14155 31592 44788 ... 04966 99383 35643 66807 60208 111 88 00000	USB	(MPJ/HFD)
G06	4519	10-12	1830	Thu	271 20 14259 22676 32782 ... 73311 98289 12250 271 20 00000	USB	(AB/MPJ)
G06	4519	10-12	1830	Thu	271 271 271 071 071 20 20 ...	USB	(MPJ)
G06	4519	24-12	1829	Thu	271 20 14259 22676 32782... 73311 98089 12250 271 20 00000	USB	(AB)
G06	4792	11-12	1930	Fri	436 271 271 20 20 14259 22676 32782 ... 73312 98289 22252 271 271 20 20 00000	USB	(GHn/MPJ)
G06	4946	9-12	1200	Wed	248 ...	USB	(AB)
G06	5320	7-12	0758	Mon	329 329 329 00000 (2 mins early)	USB	(AB)
G06	5320	21-12	0800	Mon	329 0	USB	(HFD)
HM01	9065	18-12	0759	Fri	26031 55725 88241 18606 71112 28665	AM/RDFT	(AB)
HM01	9155	4-12	0959	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(AB)
HM01	9155	18-12	0959	Fri	26031 55725 88241 18606 71112 28665	AM/RDFT	(AB)
HM01	9155	30-12	1000	Wed	i.p. ended mid digital transmission at 1017 UTC.	AM/RDFT	(K5KNT)
HM01	9240	4-12	0859	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(AB)
HM01	9240	7-12	0859	Mon	17071 53765 72359 31576 81683 48864	AM/RDFT	(AB)
HM01	9240	18-12	0859	Fri	26031 55725 88241 18606 71112 28665	AM/RDFT	(AB)
HM01	9240	20-12	0856	Sun	Brief Radio Havana, then into 26032 55727 88242 18608 71114 28667	AM/RDFT	(AB)
HM01	9330	16-12	0716	Wed	31428 55723 32038 18604 71111 28663	AM/RDFT	(K5KNT)
HM01	10715	2-12	2200	Wed	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	10715	4-12	2200	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	10715	6-12	2200	Sun	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	10715	7-12	2200	Mon	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	10715	9-12	2200	Wed	31423 48807 32033 64658 52605 07588 -Mixed audio-	AM/RDFT	(Dan)
HM01	10715	13-12	2200	Sun	31426 55721 32036 18602 52608 28661	AM/RDFT	(Dan)
HM01	10715	13-12	2208	Sun	31426 55721 32036 18602 52608 28661	AM/RDFT	(DSch)
HM01	10715	14-12	2200	Mon	31427 55722 32037 18603 52609 28662	AM/RDFT	(Dan)
HM01	10715	16-12	2200	Wed	31429 55724 32039 18605 71111 28664	AM/RDFT	(Dan)
HM01	10715	18-12	2201	Fri	26031 55726 88241 18607 71113 28666	AM/RDFT	(DSch)
HM01	10715	21-12	2200	Mon	26034 55729 88244 07031 71116 28660	AM/RDFT	(Dan)
HM01	10715	23-12	2200	Wed	26036 86611 88246 07033 71118 86701	AM/RDFT	(Dan)
HM01	10715	27-12	2200	Sun	36551 86614 17851 07306 83212 86704	AM/RDFT	(Dan)
HM01	10715	27-12	2213	Sun	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	10715	28-12	2155	Mon	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11435	2-12	1604	Wed	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	3-12	1610	Thu	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	4-12	1600	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	5-12	1600	Sat	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	6-12	1600	Sun	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	7-12	1600	Mon	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	8-12	1555	Tue	31423 48807 32033 64658 52605 07588	AM/RDFT	(AB/DSch)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
HM01	11435	9-12	1610	Wed	31423 48807 32033 64658 52605 07588 each callup group announced twice, one slightly after the other.	AM/RDFT	(DSch)
HM01	11435	10-12	1603	Thu	31423 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	11435	11-12	1630	Fri	31424 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	11435	12-12	1559	Sat	31425 55721 32035 18601 52607 28661	AM/RDFT	(DSch)
HM01	11435	13-12	1516	Sun	Late start. Radio Havana on briefly. At 1520z 31426 55721 32036 18602 52608 28661	AM/RDFT	(DSch)
HM01	11435	14-12	1604	Mon	31427 55722 32037 18603 52609 28662	AM/RDFT	(DSch)
HM01	11435	15-12	1608	Tue	31428 55723 32038 18604 71111 28663	AM/RDFT	(DSch)
HM01	11435	18-12	1559	Fri	26031 55726 88241 18607 71113 28666	AM/RDFT	(DSch)
HM01	11435	19-12	1605	Sat	26032 55727 88242 18608 71114 28667	AM/RDFT	(DSch)
HM01	11435	20-12	1601	Sun	26033 55728 88243 07031 71115 28668	AM/RDFT	(DSch)
HM01	11435	21-12	1607	Mon	26034 55729 88244 07031 71116 28869	AM/RDFT	(DSch)
HM01	11435	24-12	1559	Thu	26037 86612 88247 07034 83211 86702	AM/RDFT	(DSch)
HM01	11435	26-12	1647	Sat	36550 86614 17851 07036 83212 86104	AM/RDFT	(DSch)
HM01	11435	27-12	1628	Sun	36551 86614 17851 07036 83212 86704. A chirp chirp chirp signal followed by tone decreasing from high to low and repeating 1621-1624 UTC	AM/RDFT	(DSch)
HM01	11435	28-12	1610	Mon	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11435	29-12	1610	Tue	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11435	30-12	1647	Wed	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11435	30-12	1647	Wed	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11462	8-12	0457	Tue	Windows boot up music heard. A minute later HM01 began.	AM/RDFT	(BW3)
HM01	11462	12-12	0859	Sat	31424 48808 32034 18601 52606 07589	AM/RDFT	(AB)
HM01	11462	17-12	0500	Thu	Late start. 31429 55724 32039 18605 71111 28664	AM/RDFT	(BW3)
HM01	11462	26-12	0935	Sat	26034 55729 88244 07031 71116 28869	AM/RDFT	(Mad)
HM01	11530	1-12	1743	Tue	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11530	10-12	1659	Thu	31423 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	11530	14-12	1700	Mon	31427 55722 32037 18603 52609 28662	AM/RDFT	(DSch)
HM01	11530	16-12	1742	Wed	31429 55724 32039 18605 71111 28664	AM/RDFT	(DSch)
HM01	11530	19-12	1701	Sat	26032 55727 88242 18608 71114 28667	AM/RDFT	(DSch)
HM01	11530	28-12	1716	Mon	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11635	4-12	1800	Fri	RDFT burst on top of the normal HM01 transmission, containing test file ppp2.txt mentioning "esto es una prueba de tx con mto de yvc....saludos"	AM/RDFT	(Danix)
HM01	11635	9-12	1829	Wed	31423 48807 32033 64658 52605 07588 still messed up	AM/RDFT	(DSch)
HM01	11635	9-12	2059	Wed	31423 48807 32033 64658 52605 07588 still messed up	AM/RDFT	(DSch)
HM01	11635	10-12	1850	Thu	31423 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	11635	11-12	1812	Fri	31424 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	11635	12-12	0759	Sat	31424 48808 32034 18601 52606 07589	AM/RDFT	(AB)
HM01	11635	13-12	2109	Sun	31426 55721 32036 18602 52608 28661	AM/RDFT	(DSch)
HM01	11635	14-12	1755	Mon	31427 55722 32037 18603 52609 28662	AM/RDFT	(DSch)
HM01	11635	14-12	2058	Mon	31427 55722 32037 18603 52609 28662	AM/RDFT	(DSch)
HM01	11635	15-12	2100	Tue	31428 55723 32038 18604 71111 28663	AM/RDFT	(DSch)
HM01	11635	18-12	2059	Fri	26031 55726 88241 18607 71113 28666	AM/RDFT	(DSch)
HM01	11635	21-12	1805	Mon	26034 55729 88244 07031 71116 28869	AM/RDFT	(DSch)
HM01	11635	22-12	1759	Tue	26035 86611 88245 07032 71117 86701	AM/RDFT	(DSch)
HM01	11635	23-12	1728	Wed	26036 86611 88246 07033 71118 86701	AM/RDFT	(DSch)
HM01	11635	28-12	2053	Mon	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11635	29-12	2108	Tue	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11635	30-12	2110	Wed	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	11635	31-12	1832	Thu	36551 86614 17851 07036 83212 86704	AM/RDFT	(DSch)
HM01	12180	17-12	0959	Thu	31429 55724 32039 18605 71111 28664	AM/RDFT	(AB)
HM01	12180	26-12	1029	Sat		AM/RDDT	(K5KNT)
HM01	16180	5-12	2100	Sat	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	16180	10-12	2059	Thu	31423 48807 32033 64658 52605 07588	AM/RDFT	(DSch)
HM01	16180	17-12	2100	Thu	26031 55725 88241 18606 71112 28665	AM/RDFT	(Dan)
HM01	16180	31-12	2100	Thu	36551 86614 17851 07306 83212 86704	AM/RDFT	(Dan)
HM01	17480	1-12	2200	Tue	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	17480	3-12	2200	Thu	17071 53765 72359 31576 81683 48864	AM/RDFT	(Dan)
HM01	17480	8-12	2200	Tue	31423 48807 32033 64658 52605 07588 -Mixed audio-	AM/RDFT	(Dan)
HM01	17480	10-12	2200	Thu	31423 48807 32033 64658 52605 07588	AM/RDFT	(Dan/DSch)
HM01	17480	12-12	2158	Sat	31425 55721 32035 18601 52607 28661	AM/RDFT	(DSch)
HM01	17480	15-12	2200	Tue	31428 55723 32038 18604 71111 28663	AM/RDFT	(Dan)
HM01	17480	22-12	2200	Tue	26035 86611 88245 07032 71117 86701	AM/RDFT	(Dan)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
HM01	17480	24-12	2159	Thu	26037 86612 88247 07034 83211 86702	AM/RDFT	(DSch)
HM01	17480	24-12	2200	Thu	26037 86612 88247 07034 83211 86702	AM/RDFT	(Dan)
HM01	17480	29-12	2200	Tue	36551 86614 17851 07036 83212 86704	AM/RDFT	(Dan/DSch)
M01	2412	16-12	0544	Wed	... 78465 = 218 10 000	CW	(F5JBR)
M01	3520	14-12	1910	Mon	853 ...	CW	(AB)
M01	4490	3-12	2000	Thu	197 740 30 = = 52634 71567 33624 05526 84040 ... 95243 45959 58346 68835 08633 = = 740 30 000	CW	(MPJ)
M01	4490	15-12	2000	Tue	197 742 30 = = 27771 70076 85931 17890 36643 ... 08628 32592 92075 57904 53160 = = 742 30 000 0	CW	(MPJ)
M01	4490	17-12	2000	Thu	197 987 30 = = 22954 09657 49202 17555 00459 ... 30413 93601 36148 82401 61515 09757 53031 93986 98604 = = 987 30 000	CW	(MPJ)
M01	5320	3-12	1800	Thu	... 47551 70337 38786 ... 71363 34335 18406 52724 43511 (??) = = 205 30 000	CW	(MPJ)
M01	5320	8-12	1800	Tue	197 834 30 = = 28495 65027 08195 34655 90638 ... 63691 39102 04210 02935 81505 = = 834 30 000	CW	(MPJ)
M01	5320	10-12	1800	Thu	197 186 30 = = 46735 49755 66437 33194 55229 ... 17036 13457 82903 87586 436.1 = = 186 30 000	CW	(MPJ)
M01	5320	15-12	1800	Tue	197 182 30 = = 46735 49755 66437 33194 55229 ... 13459 13459 82903 87586 43641 = = 182 30 000	CW	(MPJ)
M01	5320	24-12	1800	Thu	197 (R) 618 618 30 30 = = 12776 34502 02640 ... 80618 43306 11939 = = 618 618 30 30 000	CW	(AB)
M01	5788	10-12	2040	Thu	463 1 2939 66 39018 85992 15194 59111 82770 ... 08221 52762 80853 35002 96859 000 000	CW	(MPJ)
M01	5810	5-12	1500	Sat	197 183 30 = = 22751 49604 96323 96001 92780 ... 34561 14832 61549 73468 64.64 = = 183 30 183 30 0 0 0	CW	(MPJ)
M01	6261	5-12	0608	Sat	i.p. 80159 = 714 34 000	CW	(F5JBR)
M01	6261	13-12	0557	Sun	863 37 = 08269 54763 90285 ... 23541 90870 58552 = 863 37 000	CW	(F5JBR)
M01	6802	10-12	2020	Thu	463 1 2939 66 39018 85992 15194 59111 82770 ... 08221 52762 80853 35002 96859 000 000	CW	(MPJ)
M01	8047	10-12	2000	Thu	463 1 2939 66 39018 85992 15194 59111 82770 ... 08221 52762 80853 35002 96859 000 000	CW	(MPJ)
M01b	2425	7-12	2015	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3205 kHz	MCW	(MPJ)
M01b	2426	21-12	1910	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3205 kHz	MCW	(MPJ)
M01b	2435	7-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3520 kHz	MCW	(MPJ)
M01b	2435	21-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3520 kHz	MCW	(MPJ)
M01b	2435	28-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3520 kHz	MCW	(MPJ)
M01b	2470	10-12	1932	Thu	910 691 ? 54 = = 35322 08807 17053 59614 03490 ... (became uncopiable both freqs). //3545 kHz	MCW	(MPJ)
M01b	2470	17-12	1932	Thu	910 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3545 kHz	MCW	(MPJ)
M01b	2485	10-12	1932	Thu	691 54 = = 35322 08807 17053 59614 03490 ... 38253 .0771 90871 50251 92315 = = 691 54 000 //3160 kHz. Callup missed.	MCW	(MPJ)
M01b	2485	17-12	2042	Thu	382 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3160 khz	MCW	(MPJ)
M01b	2655	11-12	2002	Fri	866 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //3195 kHz	MCW	(MPJ)
M01b	3160	10-12	1932	Thu	691 54 = = 35322 08807 17053 59614 03490 ... 38253 .0771 90871 50251 92315 = = 691 54 000 //2485 kHz. Callup missed.	MCW	(MPJ)
M01b	3160	17-12	2042	Thu	382 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2485 kHz	MCW	(MPJ)
M01b	3195	11-12	2002	Fri	866 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2655 kHz	MCW	(MPJ)
M01b	3205	7-12	2015	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2425 kHz	MCW	(MPJ)
M01b	3205	14-12	2015	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 60106 38253 90871 50251 92315 = = 691 54 000	MCW	(MPJ)
M01b	3205	21-12	1910	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2426 kHz	MCW	(MPJ)
M01b	3205	28-12	2015	Mon	375 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000	MCW	(MPJ)
M01b	3520	7-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2435 kHz	MCW	(MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
M01b	3520	21-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2435 kHz	MCW	(MPJ)
M01b	3520	28-12	1910	Mon	853 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2435 kHz	MCW	(MPJ)
M01b	3545	10-12	1932	Thu	910 691 ? 54 = = 35322 08807 17053 59614 03490 ... (became uncopiable both freqs). //2470 kHz	MCW	(MPJ)
M01b	3545	17-12	1932	Thu	910 691 54 = = 35322 08807 17053 59614 03490 ... 60106 38253 90871 50251 92315 = = 691 54 000 //2470 kHz	MCW	(MPJ)
M03	4505	2-12	1320	Wed	543/00 = = 000	CW	(MPJ)
M03	4505	7-12	1320	Mon	543/00 = = 000	CW	(AB)
M03	4505	9-12	1320	Wed	543/00 = = 000	CW	(AB/MPJ)
M03	4505	14-12	1320	Mon	543/00 = = 000 (VVV at 1314 UTC)	CW	(AB/F5JBR)
M03	4505	16-12	1320	Wed	543/00 = = 000	CW	(MPJ)
M03	4505	21-12	1320	Mon	544/32 = = 81094 70303 92030 48806 13032 ... 59781 78374 27443 58803 70260 = = 544/32 (repeats)	CW	(MPJ)
M03	4828	3-12	1320	Thu	437/00 = = 000	CW	(AB)
M03	4828	6-12	1320	Sun	437/00 = = 000	CW	(MPJ)
M03	4828	17-12	1320	Thu	437/00 = = 000 (VVV at 1312 UTC)	CW	(AB)
M03	4828	20-12	1320	Sun	437/00 = = 000	CW	(MPJ)
M03	4828	31-12	1320	Thu	437/00 = = 000	CW	(AB)
M08a	7554	1-12	2005	Tue	In tfc	CW	(DSch)
M08a	7554	10-12	2001	Thu	In tfc	CW	(DSch)
M08a	7554	18-12	1958	Fri	Sending callup grps	CW	(DSch)
M08a	7554	29-12	1957	Tue	GWUTN RGRUN ITTIA	CW	(DSch)
M08a	8009	17-12	2305	Thu	i.p.	CW	(BW3)
M08a	8096	2-12	1358	Wed	AUAUN DIUIA UAIAN	CW	(DSch)
M08a	8096	11-12	1422	Fri	In tfc	CW	(DSch)
M08a	8096	25-12	1420	Fri	i.p. IWDTU ARDDG NWWNN TDTNN GURWTI NWUA IRNTR RNIAD GUUIT TNGUN ...	CW	(flex)
M08a	8096	30-12	1647	Wed	In tfc	CW	(DSch)
M08a	8135	10-12	2301	Thu	No callup, into text	CW	(DSch)
M08a	8135	11-12	2256	Fri	NURTN DITDN UAUWA	CW	(DSch)
M08a	8135	18-12	2306	Fri	in tfc	CW	(DSch)
M08a	8135	29-12	2256	Tue	ANAIA DUGAA UINUN	CW	(DSch)
M08a	8135	31-12	2308	Thu	In tfc	CW	(DSch)
M12	4512	2-12	2220	Wed	350 0	CW	(HFD)
M12	4539	21-12	0530	Mon	417 417 417 000	CW	(F5JBR)
M12	5157	21-12	0550	Mon	417 417 417 000	CW	(AB)
M12	5284	10-12	0730	Thu	277 277 277 000	CW	(AB)
M12	5312	2-12	2200	Wed	350 0	CW	(HFD)
M12	5741	12-12	1350	Sat	787 1 (R) 6651 131 6651 131 68519 91784 53064 ... 01885 36517 29910 000 000	CW	(MPJ)
M12	5784	10-12	0750	Thu	277 277 277 000	CW	(AB)
M12	5784	31-12	0750	Thu	277 277 277 000	CW	(AB)
M12	5788	1-12	2040	Tue	463 1	CW	(HFD)
M12	5788	2-12	2040	Wed	463 1 7329 76 22771 47414 24247 57950 17387 ... 90297 08719 58771 59750 29377 000 000	CW	(MPJ)
M12	5788	3-12	2040	Thu	463 1 6965 78 64122 51629 19551 56416 45304 ... 20505 46952 06205 12964 37315 000 000	CW	(MPJ)
M12	5788	4-12	2040	Fri	463 1 2529 78 48414 95043 16501 09988 67696 ... 03877 11110 09102 62054 75021 000 000	CW	(MPJ)
M12	5788	5-12	2040	Sat	463 1 7080 62 36545 67008 84727 86128 07398 ... 04012 00844 07684 68168 71552 000 000	CW	(MPJ/JPL-Sib)
M12	5788	6-12	2040	Sun	463 1 9350 73 55304 19313 57815 32307 60877 17238 ... 99308 44214 13120 10963 96846 000 000	CW	(MPJ)
M12	5788	7-12	2040	Mon	643 1 1090 89 10372 32966 87494 09492 14471 ... 81143 68414 71531 70270 04481 000 000	CW	(MPJ/AB)
M12	5788	8-12	2040	Tue	463 1 1190 73 79128 1.0.3 6..34 .33.6 76948 ...	CW	(MPJ)
M12	5788	9-12	2014	Wed	463 1 9185 80 ..641 18291 01116 33220 68719 ... 64050 .1298 20829 22134 17928 000 000	CW	(MPJ)
M12	5788	11-12	2040	Fri	463 1 7629 81 07683 50273 21750 24244 29091 ... 76034 31587 53378 80730 03250 000 000	CW	(MPJ)
M12	5788	14-12	1840	Mon	463 1 1407 142 08851 45918 56779 38642 26675 ... 20917 95039 86502 72288 57863 000 000	CW	(MPJ)
M12	5788	14-12	1840	Mon	463 1	CW	(HFD)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	5788	16-12	1940	Wed	463 1 2887 141 06157 11005 11869 9..41 16214 ... ..278 99882 .1136 21489 12229 000 000	CW	(MPJ)
M12	5788	21-12	1840	Mon	463 1 (R) 3676 149 3676 149 13330 88143 98623 ... 40303 67461 93253 000 000	CW	(AB/MPJ)
M12	5788	28-12	1840	Mon	463 1 2195 146 89327 42406 48091 43153 84510 ... 06604 23567 91040 78973 24002 000 000	CW	(MPJ)
M12	5788	30-12	1940	Wed	463 1 5211 144 81649 48199 90553 36845 98013 ... 06790 77208 66521 26476 11678 000 000	CW	(MPJ)
M12	6284	17-12	0730	Thu	277 277 277 000	CW	(AB)
M12	6802	1-12	2020	Tue	463 1	CW	(HFD)
M12	6802	2-12	1920	Wed	463 1 6391 149 16490 37860 21438 09783 64852 ... 38107 73519 32009 54107 23722 000 000	CW	(MPJ)
M12	6802	2-12	2020	Wed	463 1 7329 76 22771 47414 24247 57950 17387 ... 90297 08719 58771 59750 29377 000 000	CW	(MPJ)
M12	6802	3-12	2020	Thu	463 1 6965 78 64122 51629 19551 56416 45304 ... 20505 46952 06205 12964 37315 000 000	CW	(MPJ)
M12	6802	4-12	2020	Fri	463 1 2529 78 48414 95043 16501 09988 67696 ... 03877 11110 09102 62054 75021 000 000	CW	(MPJ)
M12	6802	5-12	2020	Sat	463 1 7080 62 36545 67008 84727 86128 07398 ... 04012 00844 07684 68168 71552 000 000	CW	(MPJ)
M12	6802	6-12	2020	Sun	463 1 9350 73 55304 19313 57815 32307 60877 17238 ... 99308 44214 13120 10963 96846 000 000	CW	(MPJ)
M12	6802	7-12	2020	Mon	643 1 1090 89 10372 32966 87494 09492 14471 ... 81143 68414 71531 70270 04481 000 000	CW	(MPJ)
M12	6802	11-12	2020	Fri	463 1 7629 81 07683 50273 21750 24244 29091 ... 76034 31587 53378 80730 03250 000 000	CW	(MPJ)
M12	6802	14-12	1820	Mon	463 1 1407 142 08851 45918 56779 38642 26675 ... 20917 95039 86502 72288 57863 000 000	CW	(MPJ)
M12	6802	14-12	1820	Mon	463 1 (R) 14T7 142 14T7 142 08851 45918 66779 38642 26775 54741 T9227 33698 ...	CW	(AB/HFD)
M12	6802	16-12	1920	Wed	463 1 2887 141 06157 11005 11869 9..41 16214 ... ..278 99882 .1136 21489 12229 000 000	CW	(MPJ)
M12	6802	21-12	1820	Mon	463 1 (R) 3676 149 3676 149 13330 88143 98623 ... 40303 67461 93253 000 000	CW	(AB/MPJ)
M12	6802	28-12	1820	Mon	463 1 2195 146 89327 42406 48091 43153 84510 ... 06604 23567 91040 78973 24002 000 000	CW	(MPJ)
M12	6802	30-12	1920	Wed	463 1 5211 144 81649 48199 90553 36845 98013 ... 06790 77208 66521 26476 11678 000 000	CW	(MPJ)
M12	6841	3-12	1330	Thu	787 787 787 000	CW	(HFD)
M12	6841	5-12	1330	Sat	787 787 787 000	CW	(AB)
M12	6841	12-12	1330	Sat	787 1 (R) 6651 131 6651 131 68519 91784 53064 ... 01885 36517 29910 000 000	CW	(MPJ)
M12	6841	17-12	1313	Thu	787 787 787 000	CW	(AB)
M12	6841	24-12	1330	Thu	787 1 (R) 677 97 677 97 73592 41282 96339 60131 ...	CW	(AB)
M12	6904	2-12	1840	Wed	247 1 736 194 00942 14099 62017 38014 69216 ... 57928 40602 35107 35012 46559 000 000	CW	(MPJ)
M12	6904	7-12	1940	Mon	257 1 5398 89 73189 80935 11157 72054 71812 ... 30497 56728 60569 17145 65367 000 000	CW	(MPJ)
M12	6904	14-12	1940	Mon	257 1 7758 80 70882 85502 81626 12472 73427 ... 28193 83315 25666 95088 43260 000 000	CW	(MPJ)
M12	6904	16-12	1840	Wed	257 1 3925 148 54704 10001 02970 17565 06175 ... 74920 28674 79790 54604 45200 000 000	CW	(MPJ)
M12	6904	28-12	1940	Mon	257 1 2197 82 19390 94011 83499 45608 11361 ... 94539 41170 34199 81569 30298 000 000	CW	(MPJ)
M12	7584	5-12	0620	Sat	751 751 751 000	CW	(AB)
M12	7584	23-12	0618	Wed	751 751 751 000	CW	(F5JBR)
M12	7741	3-12	1310	Thu	787 787 787 000	CW	(HFD)
M12	7741	5-12	1310	Sat	787 787 787 000	CW	(AB)
M12	7741	12-12	1310	Sat	787 1 (R) 6651 131 6651 131 68519 91784 53064 ... 01885 36517 29910 000 000	CW	(AB/MPJ)
M12	7741	17-12	1310	Thu	787 787 787 000	CW	(AB)
M12	7741	26-12	1310	Sat	787 1 (R) 677 97 677 97 73592 41282 96339 60131 ...	CW	(AB)
M12	7741	31-12	1310	Thu	787 787 787 000	CW	(AB)
M12	7931	2-12	1820	Wed	247 1 736 194 00942 14099 62017 38014 69216 ... 57928 40602 35107 35012 46559 000 000	CW	(MPJ)
M12	7931	9-12	1820	Wed	257 1 736 192 0094. .4099 62017 38016 921... ..928 40602 35107 34..1 46657 000 000	CW	(MPJ)
M12	7931	14-12	1920	Mon	257 1 7758 80 70882 85502 81626 12472 73427 ... 28193 83315 25666 95088 43260 000 000	CW	(MPJ)
M12	7931	16-12	1820	Wed	257 1 3925 148 54704 10001 02970 17565 06175 ... 74920 28674 79790 54604 45200 000 000	CW	(MPJ)



Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	7931	21-12	1920	Mon	257 1 8993 90 47333 85041 87131 55717 22985 ... 27783 00416 97523 30086 78287 000 000	CW	(MPJ)
M12	7931	28-12	1920	Mon	257 1 2197 82 19390 94011 83499 45608 11361 ... 94539 41170 34199 81569 30298 000 000	CW	(MPJ)
M12	8047	1-12	2000	Tue	463 1	CW	(HFD)
M12	8047	2-12	2000	Wed	463 1 7329 76 22771 47414 24247 57950 17387 ... 90297 08719 58771 59750 29377 000 000	CW	(MPJ)
M12	8047	4-12	2000	Fri	463 1 2529 78 48414 95043 16501 09988 67696 ... 03877 11110 09102 62054 75021 000 000	CW	(MPJ)
M12	8047	5-12	2000	Sat	463 1 7080 62 36545 67008 84727 86128 07398 ... 04012 00844 07684 68168 71552 000 000	CW	(MPJ)
M12	8047	6-12	2000	Sun	463 1 9350 73 55304 19313 57815 32307 60877 17238 ... 99308 44214 13120 10963 96846 000 000	CW	(MPJ)
M12	8047	7-12	2000	Mon	643 1 1090 89 10372 32966 87494 09492 14471 ... 81143 68414 71531 70270 04481 000 000	CW	(MPJ)
M12	8047	11-12	2000	Fri	463 1 7629 81 07683 50273 21750 24244 29091 ... 76034 31587 53378 80730 03250 000 000	CW	(MPJ)
M12	8047	14-12	1800	Mon	463 1 ...	CW	(HFD)
M12	8047	16-12	1900	Wed	463 1 2887 141 06157 11005 11869 9..41 16214 ... ..278 99882 .1136 21489 12229 000 000	CW	(MPJ)
M12	8047	21-12	1800	Mon	463 1 (R) 3676 149 3676 149 13330 88143 98623 ... 40303 67461 93253 000 000	CW	(AB/MPJ)
M12	8047	23-12	1900	Wed	463 1 ...	CW	(AB)
M12	8047	28-12	1800	Mon	463 1 2195 146 89327 42406 48091 43153 84510 ... 06604 23567 91040 78973 24002 000 000	CW	(MPJ)
M12	8047	30-12	1900	Wed	463 1 5211 144 81649 48199 90553 36845 98013 ... 06790 77208 66521 26476 11678 000 000	CW	(MPJ)
M12	8116	10-12	1840	Thu	124 1 6161 144 6.874 36.87 89910 2150. 55584 ... 11240 20801 768.. .1475 71..2 000 000	CW	(MPJ)
M12	8116	17-12	1740	Thu	124 1 3.81 14.. 2...5 24..9 0540. 3..8. ... very poor	CW	(MPJ)
M12	8116	22-12	2010	Tue	124 1 9579 94 16641 07972 26979 01938 84222 ... 000 000	CW	(MPJ)
M12	9176	2-12	1800	Wed	247 1 736 194 00942 14099 62017 38014 69216 ... 57928 40602 35107 35012 46559 000 000	CW	(MPJ)
M12	9176	14-12	1900	Mon	257 1 7758 80 70882 85502 81626 12472 73427 ... 28193 83315 25666 95088 43260 000 000	CW	(MPJ)
M12	9176	21-12	1900	Mon	257 1 8993 90 47333 85041 87131 55717 22985 ... 27783 00416 97523 30086 78287 000 000	CW	(MPJ)
M12	9176	28-12	1900	Mon	257 1 2197 82 19390 94011 83499 45608 11361 ... 94539 41170 34199 81569 30298 000 000	CW	(MPJ)
M12	9264	3-12	1820	Thu	124 1 695 (?) 143 15409 35783 45611 76412 488.. .....	CW	(MPJ)
M12	9264	22-12	1950	Tue	124 1 9579 94 16641 07972 26979 01938 84222 ... 000 000	CW	(MPJ)
M12	10343	22-12	1930	Tue	124 1 9579 94 16641 07972 26979 01938 84222 ... 000 000	CW	(MPJ)
M12	10711	3-12	1740	Thu	546 1	CW	(HFD)
M12	11491	3-12	1540	Thu	725 1 172 148 54242 38288 12999 37955 86213 ... 48862 53293 63730 85678 19495 000 000	CW	(MPJ)
M12	11491	10-12	1540	Thu	725 1 1863 127 22418 39354 44150 80132 01684 ... 37916 73049 06468 98489 81733 000 00	CW	(MPJ)
M12	11491	17-12	1540	Thu	725 1 (R) 3245 118 3245 118 ... 71165 72397 47323 36139 06377 000 000	CW	(AB)
M12	11492	24-12	1540	Thu	725 1 (R) 7140 141 7140 141 24688 89692 69755 ... 34701 64183 35951 000 000	CW	(AB)
M12	11566	3-12	1720	Thu	546 1 ...	CW	(HFD)
M12	12162	3-12	1700	Thu	546 1 ...	CW	(HFD)
M12	12189	3-12	1520	Thu	725 1 172 148 54242 38288 12999 37955 86213 ... 48862 53293 63730 85678 19495 000 000	CW	(MPJ)
M12	12189	10-12	1520	Thu	725 1 1863 127 22418 39354 44150 80132 01684 ... 37916 73049 06468 98489 81733 000 000	CW	(MPJ)
M12	12189	17-12	1520	Thu	725 1 (R) 3245 118 3245 118 ... 71165 72397 47323 36139 06377 000 000	CW	(AB)
M12	12189	31-12	1520	Thu	725 1 (R) 8708 128 8708 128 15733 37116 91137 98404 97311 ...	CW	(AB)
M12	12205	21-12	1100	Mon	973 1 (R) 1412 141 1412 141 78167 00503 54338 ... 88042 40118 34125 000 000	CW	(AB)
M12	12205	21-12	1100	Mon	973 1 1412 141 78167 00503 54338 36349 11736 ... 37340 63717 88042 40118 34125 000 000	CW	(MPJ)
M12	12279	27-12	1030	Sun	582 582 582 1 (R) 4272 149 4272 149 77835 65169 63735 ... 27269 92096 09697 000 000	CW	(AB)
M12	13386	10-12	1500	Thu	725 1 (R) 1863 127 1863 127 22418 39354 44150 80132 01684 ...73049 06468 98489 81733 000 000	CW	(AB)
M12	13386	31-12	1500	Thu	725 1 (R) 8708 128 8708 128 15733 37116 91137 98404 97311 ...	CW	(AB)
M12	13559	21-12	1120	Mon	973 1 1412 141 78167 00503 54338 36349 11736 ... 37340 63717 88042 40118 34125 000 000	CW	(MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	13559	21-12	1120	Mon	973 1 (R) 1412 141 1412 141 78167 00503 54338 ... 88042 40118 34125 000 000	CW	(AB)
M12	13559	28-12	1120	Mon	973 1 (R) 8741 142 8741 142 ...	CW	(AB)
M12	13569	10-12	1010	Thu	582 582 582 000	CW	(AB/HFD)
M12	13569	17-12	1010	Thu	582 582 582 000	CW	(AB)
M12	13569	24-12	1010	Thu	582 1 (R) 4272 149 4272 149 77835 65169 13735 ...	CW	(AB)
M12	14728	21-12	1140	Mon	973 1 (R) 1412 141 1412 141 78167 00503 54338 ... 88042 40118 34125 000 000	CW	(AB)
M12	14728	21-12	1140	Mon	973 1 1412 141 78167 00503 54338 36349 11736 ... 37340 63717 88042 40118 34125 000 000	CW	(MPJ)
M12	14869	6-12	1030	Sun	582 1 5204 115 88659 53127 17706 ... 22779 94162 07899 000 000	CW	(AB)
M12	14869	10-12	1030	Thu	582 0	CW	(HFD)
M12	14869	13-12	1030	Sun	582 582 582 000	CW	(AB)
M12	14869	27-12	1030	Sun	582 582 582 1 (R) 4272 149 4272 149 77835 65169 63735 ... 27269 92096 09697 000 000	CW	(AB)
M12	14919	11-12	1520	Fri	394 394 394 000	CW	(MPJ)
M12	14919	18-12	1520	Fri	No transmission. Carrier on and off a couple of times	CW	(AB)
M12	16319	11-12	1500	Fri	394 394 394 000	CW	(MPJ)
M12	16319	18-12	1500	Fri	394 394 394 000	CW	(AB)
M12	19578	9-12	0730	Wed	458 458 458 000	CW	(AB)
M14	1974	2-12	1831	Wed	910 (R) 245 245 67 67 9... 245 245 67 67 00000	USB	(F5JBR)
M14	4460	10-12	1300	Thu	359 359 359 00000	CW	(F5JBR)
M14	4636	8-12	1820	Tue	186 (R) 1 144 22 22 12345 23456 34567 ... 01929 10201 01005 144 144 22 22 00000 Errors is the key and 9th group	CW	(AB/MPJ)
M14	4636	22-12	1820	Tue	186 144 22 12345 23456 34567 45678 00110 ... 01567 01929 10201 01000 01005 144 22 00000	MCW	(MPJ)
M14	4761	9-12	1920	Wed	748 7 9279 (79279 ?) 15 98712 56767 43244 99934 12213 ... 05058 71236 98123 63810 65567 279 279 15 15 (no zeros). Quite a few errors	MCW	(MPJ)
M14	4761	23-12	1919	Wed	748 144 22 12345 23456 34567 45678 00110 ... 01567 01929 10201 01000 01005 144 22 00000	MCW	(MPJ)
M14	4975	4-12	1800	Fri	382 382 382 00000	CW	(MPJ)
M14	4975	18-12	1800	Fri	382 382 382 00000	CW	(AB)
M14	5240	6-12	2300	Sun	376 (R) 279 279 15 15 98712 56767 43244 ... 98120 63810 65567 279 279 15 15 (no zero's at the end)	CW	(AB)
M14	5374	4-12	1700	Fri	382 382 382 00000	CW	(AB/MPJ)
M14	5374	18-12	1700	Fri	382 382 382 00000	CW	(AB/F6JBR)
M14	5430	5-12	0800	Sat	171 144 22 1##45	CW	(HFD)
M14	5430	5-12	0800	Sat	171 (R) 144 22 12345 23456 34567 ... 01929 10201 01005 144 22 00000	CW	(AB)
M14	5560	5-12	0900	Sat	171	CW	(HFD)
M14	6767	13-12	0700	Sun	382 382 382 00000	CW	(AB)
M14	6767	27-12	0700	Sun	382 382 382 00000	CW	(AB)
M14	17548	10-12	0930	Thu	457 457 457 00000	CW	(AB)
M21	3322	1-12	2059	Tue	Russian Air Defence (PVO) =990002??0?????	CW	(MPJ)
M21	3572	23-12	1920	Wed	Russian Air Defence 97659999384320 9760999383220 9761996584420 9763996089822 9762996588722	CW	(F5JBR)
M21	4192	1-12	1922	Tue	=992325?8?????	CW	(PPA)
M21	5860	28-12	1303	Mon	=17000203989403 =17000203989403 =991603??02????? =17000203989304 =17000203989404	CW	(JPL-Sib)
M22	2680	4-12	1849	Fri	VVV DE 4XZ 4XZ = =	CW	(PPA)
M22	2680	9-12	2020	Wed	VVV DE 4XZ 4XZ	CW	(MPJ)
M22	8159	15-12	1835	Tue	VVV DE 4XZ 4XZ = =	CW	(AB)
M22	8159	23-12	0811	Wed	VVV de 4XZ = VVV de 4XZ =	CW	(F5JBR)
M22	17325	1-12	1224	Tue	4XZ Calling and Messages	CW	(F5JBR)
M22	17325	17-12	1028	Thu	4XZ sending messages and vvv de 4XZ.	CW	(EW)
M23?	5346.4	12-12	1637	Sat	111 111 111 ...	CW	(MPJ)
M24	10473	8-12	1330	Tue	980 564 73 = 93255 00614 34947 ... 80813 81493 70876 = 564 73 00000	CW	(AB)
M24	12093	24-12	1300	Thu	980 253 77 = 54855 54466 90977 ... 38970 11508 91865 = 253 77 00000	CW	(AB)
M32	2545.5	29-12	1745	Tue	9ZK4 QTC K. 278 87 29 1935 278 = 153 = 30126 06062 06062 00156 00426 01056 (see N&O 219)	CW	(F5JBR)
M32	2545.5	29-12	1838	Tue	9ZK4 QTC K. 284 99 29 2000 284 = 153 = 30126 02024 02024 00011 00077 01090 (see N&O 219)	CW	(F5JBR)
M32	2706	28-12	1622	Mon	XXX WEGi 80812 TRILISTNIK 3528 2782 K	CW	(F5JBR)
M32	2706	28-12	1751	Mon	XXX WEGi 15162 ETILGEKSEN 4370 5809 K	CW	(F5JBR)
M32	2783	18-12	1916	Fri	ALTAR-61 wkg outstations	CW	(F5JBR)
M32	3392.5	21-12	1526	Mon	XXX VZFY 08866 GEKSEN 8150 3519 K	CW	(F5JBR)
M32	4640	10-12	0602	Thu	RZD2 comms checks with RXA5, RYH2, RAY5	CW	(F5JBR)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M32	5123	8-12	1237	Tue	IK7R DE M8TK K. QSA NO QSY 50561 50561 K. BK BK QSA 1 QLO 20 QLO 20 K.	CW	(JPL-Sib)
M32	5127	9-12	1034	Wed	i.p. 727 = LDBO LDBO LDBO QTC 299 29 9 1330 299 = 334 = IZLDR RGRN █████ DDDDD EAKU F-BQO (Cont'd)	CW	(JPL-Sib)
M32	5145	1-12	1059	Tue	TCVV DE SXOX K. QSA 1 QSA ? K. QTC K. SXOX 179 32 1 1400 179 = 750 = RZFPN TEXAQ KJOBH MRCUA ...	CW	(JPL-Sib)
M32	5396	9-12	1032	Wed	XXX XXX ETAP ETAP JOEL JOEL 15272 53944 ALXDABRA 3621 6499 K	CW	(JPL-Sib)
M32	6851	11-12	0542	Fri	MEKTAR-15 comms checks with out stations	CW	(F5JBR)
M32	7806	9-12	1022	Wed	TSLP DE OCWQ K	CW	(JPL-Sib)
M32	7931	9-12	1021	Wed	40F2 DE 8OLL QTC ZNF 339 200 9 1235 339 = ZNF 778 = MMMMM HQY █████ QNDEO VCINP (Cont'd)	CW	(JPL-Sib)
M32	9169	9-12	1014	Wed	XXX XXX NGIY NGIY 55346 82429 N.OFILA 9277 5432 OMORF 4988 9436 K UUUUUUUU XXX XXX (Into data mode)	CW	(JPL-Sib)
M32	12631	28-12	0951	Mon	RDL RDL RDL 871T1 83746 871T1 83746 871T1 83746 K	CW	(AB)
M32	12631	28-12	0952	Mon	UUUUU XXX XXX WEGI WEGI 86847 66166 BURAEWEC 8512 1323 XXX XXX WEGI WEGI 86847 66166 BURAEWEC 8512 1323 K	CW	(AB)
M32a	3692.5	1-12	0510	Tue	RJD99 Russian Navy comms checks and QTC with RAS82, RAY85, RBC89, RBE99, RJI70, RJI92, RMJW. QSX 4635 kHz	CW	(F5JBR)
M32a	4797	6-12	1903	Sun	RHQ2 DE RAL2 K. DE ? K. QSA 2 QRU VA. RBL66 DE RAL2 K. RMW2 RMW2 RMW2 DE RAL2 RAL2 K. RAL2 DE RMW2 QSA 1 AA NO ?	CW	(JPL-Sib)
M32a	4940.5	1-12	0453	Tue	RIQ88 Russian Navy comms checks and QTC with RAI62, RAI63	CW	(F5JBR)
M32a	5916	3-12	1956	Thu	Navy Sevastopol RIC87 RIC87 DE RCV QTC 108 81 3 2312 108 =	CW	(PPA)
M32a	10395	9-12	0642	Wed	Russian Navy i.p. YKUKW QGRQZ POLRT PDVLI AWEPI RPNEK LYAKC 124 RPT AL K. RMW32 = 14329 925 K. RMW32 = LORLV K. RMW32 = LORLV K	CW	(AB)
M32a	12631	3-12	0950	Thu	U U U XXX XXX RGT77 RGT77 20872 46310 GIDRATAZA 7138 0151 K	CW	(AB)
M32a	12631	3-12	0957	Thu	XXX XXX RDL RDL 96818 87596 ZUWELXKA 2154 2873 K	CW	(AB)
M32a	12631	3-12	1003	Thu	XXX RDL RDL RDL 48200 47847 ...	CW	(AB)
M32a	12631	3-12	1122	Thu	RDL RDL RDL 18664 16208 18664 16208 18664 16208 K	CW	(AB)
M32a	16112	13-12	0712	Sun	i.p. .9957 12074 07645 54225 51576 17037 80654 74984 85212 29326 23099 49659 89939 44933 91746 13031 = AR RAA K. RAA OK QRU K	CW	(AB)
M32c	2737	28-12	1630	Mon	XXX 1QRF 8 06929 MOROZOBOIN 4478 5201 K	CW	(F5JBR)
M32c	2737	28-12	1632	Mon	XXX 1QRF 80592 TRILISTNIK 3528 2782 K	CW	(F5JBR)
M32c	2737	28-12	1751	Mon	XXX 1QRF 09303 11TILGEKSEN 4370 5809 K	CW	(F5JBR)
M32c	2737	28-12	1757	Mon	XXX 1QRF 51461 11TIOKARMID 8529 5674 K	CW	(F5JBR)
M32c	4043	30-12	1901	Wed	XXX LR43 49631 NITOENYJ 4940 9004 K	CW	(F5JBR)
M32c	4649	11-12	0730	Fri	XXX 1QRF 88792 PROSNA 3142 8162 MONONITX 6937 4423 K	CW	(F5JBR)
M32c	7566	28-12	1804	Mon	XXX RJV 35873 DESETNIK 9796 9871 K	CW	(F5JBR)
M32c	8112	9-12	0700	Wed	W-marker	CW	(AB)
M41	2006.5	17-12	0530	Thu	SEQB SEQB AR //4054.5 kHz	CW	(F5JBR)
M41	3194	20-12	1931	Sun	ABV 7160 33 722 511 6400 50034 6402 982 3734 713035 722 511 6402 60035 6404 985 4172 715035 722 511 6404 60036 AR	CW	(F5JBR)
M41	4054.5	17-12	0530	Thu	SEQB SEQB AR //2006.5 kHz	CW	(F5JBR)
M41	4444.5	29-12	1730	Tue	EQM2 EQM2 EQM2 AR	CW	(F5JBR)
M41	5226	7-12	1531	Mon	i.p. 869969268228 71190 1658 W2WE K and VVV VVV WKNE 1949 786996926912882190 1649 = 1949 7869692 68128711 901658 ZJNL AR	CW	(F5JBR)
M41	5733.5	7-12	0731	Mon	005573 32761698112436 = 005573 327616981 1036 =	CW	(F5JBR)
M42	3185	16-12	0547	Wed	UTN7 de UZC2 GM QRU GB 73 SK	CW	(F5JBR)
M42	3838	19-12	0730	Sat	NLAT de VGKE QSA NO QSY92516 QSA NO SK	CW	(F5JBR)
M42	4795	16-12	0503	Wed	Russian Intel. Broadcast. Ended 0514 UTC.	MFSK- 4/150bd/4000Hz/AC F=12	(Danix)
M42	4795	17-12	0503	Thu	Russian Intel. Broadcast	MFSK- 4/150bd/4000Hz/AC F=12	(Danix)
M42	4820	30-12	0652	Wed	Russian PtP station. CW call up RHM2 DE RWV72 ZHC? into data	RUS-ARQ 100/500	(PPA)
M42	4858	16-12	0357	Wed	Russian Intel. Broadcast. Ended 0409 UTC.	MFSK- 4/150bd/4000Hz/AC F=12	(Danix)
M42	4858	17-12	0357	Thu	Russian Intel. Broadcast	MFSK- 4/150bd/4000Hz/AC F=12	(Danix)
M42	4858	17-12	0410	Thu	Russian Intel. Broadcast	MFSK- 4/150bd/4000Hz/AC F=12	(Danix)
M42	5325	30-12	0720	Wed	Russian PtP station. RND79 wkg RFT6 and RBW	RUS-ARQ 100/500	(PPA)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
M42	5356	16-12	0349	Wed	Russian Intel. Broadcast. Ended 0355 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	5356	17-12	0357	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	5440	30-12	0721	Wed	Russian PtP station. RWD59 idling	RUS-ARQ 100/500	(PPA)
M42	5449	16-12	0453	Wed	Russian Intel. Broadcast. Ended 0501 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	5449	17-12	0453	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	6795	24-12	0728	Thu	RXZ32: St.Petersburg	FSK 50/500	(PPA)
M42	6830	23-12	0642	Wed	VVV RYF2 DE RWI QSA?	CW	(PPA)
M42	6950	30-12	0743	Wed	CW call up RCZ32 DE RZT71 ZSC then into FSK 100/500	CW	(PPA)
M42	7630	30-12	0747	Wed	Russian PtP station Kirov. RDP5 wkg RMC-27	RUS-ARQ 100/500	(PPA)
M42	7823	2-12	1315	Wed	Russian Intel. Null message. Ended 1316 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	8-12	0915	Tue	Russian Intel. Null message. Ended 0916 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	8-12	1315	Tue	Russian Intel. Null message. Ended 1316 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	16-12	1315	Wed	Russian Intel. Broadcast. Ended 1323 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	17-12	1315	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	17-12	1345	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7823	21-12	1245	Mon	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7859	18-12	0730	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	7859	18-12	1110	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	8171	15-12	1305	Tue	Russian Intel. Broadcast. Ended 1315 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	8171	16-12	1305	Wed	Russian Intel. Broadcast. Ended 1313 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	8171	16-12	1310	Wed	Russian Intel.	MFSK-4/150bd/4000Hz/AC F=12	(AAI)
M42	8171	17-12	1305	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	9140	28-12	0805	Mon	Russian PtP RUU70 call to RRF30 for ZHC? Then idling and into crypto	FSK 100/500	(PPA)
M42	9300	3-12	1143	Thu	Russian Intel. Ended 1202 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	9300	7-12	1520	Mon	Russian Intel. Test session. Ended 1522 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	9300	11-12	1050	Fri	Russian Intel. Test session. Ended 1053 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	9300	18-12	0653	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42	9971	17-12	1100	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	10380	28-12	0926	Mon	RBW43: Murmansk	FSK 100/500	(PPA)
M42	10595	23-12	0752	Wed	RKD48: Moscow	FSK 100/500	(PPA)
M42	10806	1-12	1323	Tue	Russian Intel. Burst every 10 secs	5x MFSK-16 + 250bd BPSK	(Danix)
M42	10906	3-12	1345	Thu	Russian Intel. QSX 12156. Ended 1442 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	10930	2-12	1345	Wed	Russian Intel. QSX 12156. Ended 1444 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	10943	8-12	0630	Tue	Russian Intel. Null message. Ended 0631 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11025	28-12	0813	Mon	RKV23: Tyumen	RUS-ARQ 100/500	(PPA)
M42	11163	2-12	1515	Wed	Russian Intel. Null message. Ended 1516 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11452	2-12	1420	Wed	Russian Intel. Broadcast. Ended 1429 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11452	3-12	1420	Thu	Russian Intel. Broadcast. Ended 1429 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11462	7-12	0832	Mon	Russian Intel. QSX 12173. Ended 0921 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11482	2-12	1340	Wed	Russian Intel. QSX 12156. QSY to 10930 at 1345 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11482	3-12	1340	Thu	Russian Intel. QSX 12156. QSY'd to 10906 at 1345 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	11617	4-12	1100	Fri	Russian Intel. Null message. Ended 1101 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12073	17-12	1050	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12156	2-12	1340	Wed	Russian Intel. QSX: first 11482, then 10930. Ended 1444 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12156	3-12	1340	Thu	Russian Intel. QSX: first 11482, then 10906. Ended 1442 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12156	3-12	1430	Thu	Russian Intel.	MFSK-4/150bd/4000Hz/AC F=12	(AAI)
M42	12173	7-12	0830	Mon	Russian Intel. QSX: at first 13856, then 11462. Ended 0921 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12173	7-12	0845	Mon	Russian Intel.	MFSK-4/150bd/4000Hz/AC F=12	(AAI)
M42	12173	14-12	0830	Mon	Russian Intel. QSX 13856. Ended 0913 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	12173	21-12	0830	Mon	Russian Intel. QSX 13856	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	13428	24-12	1045	Thu	Russian Intel. Null message	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	13440	11-12	0929	Fri	UCU de UCC QSY 20254 K. QSA 4 QRU NIL SK	CW	(F5JBR)
M42	13856	7-12	0830	Mon	Russian Intel. QSX 12173. QSY'd to 11462 at 0832 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42	13856	14-12	0830	Mon	Russian Intel. QSX 12173. Ended 0913 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	13856	21-12	0830	Mon	Russian Intel. QSX 12173	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	14729	18-12	1045	Fri	Russian Intel. Null message	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	14983	7-12	0910	Mon	Russian Intel. Broadcast. Ended 0918 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	14983	21-12	0911	Mon	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15622	10-12	0845	Thu	Russian Intel. Broadcast. Ended 0850 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15623	18-12	0845	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15623	21-12	0918	Mon	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15623	25-12	0845	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	1-12	0830	Tue	Russian Intel. QSX 16166. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	4-12	0830	Fri	Russian Intel. QSX 16166. Ended 0842 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	8-12	0830	Tue	Russian Intel. QSX 16166. Ended 0837 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	11-12	0830	Fri	Russian Intel. QSX 16166. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	15-12	0830	Tue	Russian Intel. QSX 16166. Ended 0848 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	18-12	0830	Fri	Russian Intel. QSX 16166	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15626	25-12	0830	Fri	Russian Intel. QSX 16166	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15639	2-12	1505	Wed	Russian Intel. Null message. Ended 1506 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15782	3-12	0700	Thu	Russian Intel. Null message. Ended 0701 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15861	24-12	1035	Thu	Russian Intel. Null message	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15933	4-12	1050	Fri	Russian Intel. Null message. Ended 1051 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15967	2-12	1430	Wed	Russian Intel. Broadcast. Ended 1439 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	15967	3-12	1430	Thu	Russian Intel. Broadcast. Ended 1439 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16083	7-12	0900	Mon	Russian Intel. Broadcast. Ended 0908 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42	16083	14-12	0900	Mon	Russian Intel. Broadcast. Ended 0905 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16083	21-12	0900	Mon	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	1-12	0830	Tue	Russian Intel. QSX 15626. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	4-12	0830	Fri	Russian Intel. QSX 15626. Ended 0842 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	8-12	0830	Tue	Russian Intel. QSX 15626. Ended 0837 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	11-12	0830	Fri	Russian Intel. QSX 15626. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	14-12	0830	Mon	Russian Intel. QSX 15626. Ended 0848 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	18-12	0830	Fri	Russian Intel. QSX 15626	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	16166	25-12	0830	Fri	Russian Intel. QSX 15626	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	17471	3-12	0650	Thu	Russian Intel. Null message. Ended 0651 UTC.	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	18100	3-12	1310	Thu	Russian Intel. Burst every 10 secs	5 x MFSK-16 10Bd 20Hz + BPSK 250Bd	(AAI)
M42	18192	18-12	1035	Fri	Russian Intel. Null message	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	18512	18-12	0855	Fri	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42	18696	21-12	0830	Mon	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/AC F=12	(Danix)
M42b	2002	15-12	1827	Tue	NT9P wkg K4MT	FSK 50/500	(F5JBR)
M42b	2053	17-12	1556	Thu	KIWW: QRU QRV KNIL SK (Traffic in FSK 50/500)	CW	(F5JBR)
M42b	3628	16-12	0613	Wed	PLXW wkg PZAK (Ops chat in Morse, message in FSK 50/500)	CW	(F5JBR)
M42b	3628	31-12	0605	Thu	PLXW wkg PZAK	CW	(F5JBR)
M42b	3785	23-12	0544	Wed	132 51 23 0135 198 FM 75173 FM 75173 FOR 75980 FOR 75980 97627 08044 ... FM 75169 FM 75169 FOR 75980 FOR 75980 K. CFM NIL K. SK	CW	(F5JBR)
M42b	3817	31-12	0610	Thu	PLXW de PZAK QSA NO QSY 45123 QSA NO SK	CW	(F5JBR)
M42b	3833	2-12	1554	Wed	Russian diplo/intel. Ops chat in CW, message in FSK 50/500. QTC 1 ZZC K. CFM BIL SK	CW	(F5JBR)
M42b	3875	23-12	0633	Wed	Net station wkg TZ9X (ops chat in CW, message in FSK) : QRU NIL SK	FSK 50/500	(F5JBR)
M42b	4012	29-12	0740	Tue	Traffic in FSK and opchat in CW: QRU NIL SK	FSK 50/500	(F5JBR)
M42b	4023	5-12	1813	Sat	Ops chat in Morse, messages in FSK 50/500 CUFD de IWBT QTC 1 K. QRX21477/21580 QSY 25238/26600 QSW 24766/26915 K and AR	CW	(F5JBR)
M42b	4024	14-12	1318	Mon	Message in FSK 50/500 and ops chat in CW: QRU NIL SK	FSK 50/500	(F5JBR)
M42b	4028	2-12	1607	Wed	Russian diplo/intel. Ops chat in CW, message in FSK 50/500. QTC 1 ZZC K. CFM BIL SK	CW	(F5JBR)
M42b	4035	23-12	0641	Wed	TZ9X 942 72 23 0650 6534 k 01010 25202 71202 20616 71202 21344 56561	CW	(F5JBR)
M42b	4040	5-12	1517	Sat	Ops chat in Morse, messages in FSK 50/500 CUFD de IWBT K and QSY 26688 K and QSY 25487 K	CW	(F5JBR)
M42b	4561	7-12	1521	Mon	G3WM wkg SK8I. Ops chat in CW, message in FSK 50/500	CW	(F5JBR)
M42b	4607	23-12	1145	Wed	TZBP de MNBV QSY 88542 K and QSA NO SK SK	CW	(F5JBR)
M42b	4607	23-12	1145	Wed	TZBP de MNBV QSY 88542 K. QSA NO SK SK	CW	(F5JBR)
M42b	4640	10-12	1841	Thu	TYA1 comms checks PI2W (ops chat in CW and message in FSK 50/500)	CW	(F5JBR)
M42b	4753	23-12	1213	Wed	EBCW de ZE4A QSA NO K	CW	(F5JBR)
M42b	4759	23-12	1246	Wed	MI4A QTC 10 K. MI4A NW = 946 51 22 1830 183 = FM 75151 FM 75151 FOR 75980 FOR 75980 = 39718 79956 06674 ...	CW	(F5JBR)
M42b	4837	15-12	1549	Tue	AIFH wkg CDAP	CW	(AB)
M42b	4856	26-12	0626	Sat	Traffic in FSK and Morse: QRU NIL SK	FSK 50/500	(F5JBR)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42b	4871	10-12	1920	Thu	G3WM comms checks SK8I (ops chat in CW and message in FSK 50/500)	CW	(F5JBR)
M42b	5013	16-12	0722	Wed	587 221 16 0700 3873 K. QRU NIL SK (Ops chat in Morse, message in FSK 50/500)	CW	(F5JBR)
M42b	5091	3-12	1344	Thu	Ops chat in Morse, messages in FSK 50/500 CFM QRV K R 527 1352	CW	(F5JBR)
M42b	5211	7-12	1624	Mon	Ops chat in CW, message in FSK 50/500	CW	(F5JBR)
M42b	5343	23-12	1233	Wed	S3MF wkg MI4A (MIA4 send QLP 20) QSX 4759 kHz	CW	(F5JBR)
M42b	5363	23-12	1239	Wed	S3MF wkg MI4A (QSX 4759 kHz)	CW	(F5JBR)
M42b	5437	21-12	0617	Mon	Traffic in FSK 50/500 and ops chat Morse: QRU NIL SK. QSX on 4856 kHz	FSK 50/500	(F5JBR)
M42b	5745	1-12	1817	Tue	IWBT DE CUFD K QSY 29298	CW	(PPA)
M42b	6925	30-12	0645	Wed	PRAT wkg LKDW (Traffic in FSK, opchat in CW) QRU NIL SK	FSK 50/500	(F5JBR)
M42b	6925	31-12	0648	Thu	PRAT wkg LKDW (Traffic in FSK and opchat in CW) QRU NIL SK	CW	(F5JBR)
M42b	7352	8-12	0917	Tue	de FI8R K. ZVP. QRV R 249 0921 (ops chat in CW, message in FSK 50/500) QRU NIL SK	CW	(F5JBR)
M42b	8157	4-12	1031	Fri	QSA ? K. QTC 1 ZZC ZVP 4D K. RYRYRY in FSK 50/500.	CW	(JPL-Sib)
M42b	11140	11-12	0926	Fri	UCC de UCU QSY 13440 K	CW	(F5JBR)
M42b	12210	20-12	0039	Sun	Traffic in FSK 50/500 and opchat in Morse: QRU NIL SK	FSK 50/500	(F5JBR)
M42b	12224	10-12	0718	Thu	UCC QSA NO QSY 18177 18177 and QSA 4 NIL SK	CW	(F5JBR)
M42b	14441	17-12	0806	Thu	Traffic in FSK and opchat in CW: OK QSW 98113 K	FSK 50/500	(F5JBR)
M42b	14441	19-12	0818	Sat	K9VE wkg IC8U (Message FSK 50/500 and ops chat in Morse) QSX 18049 kHz	CW	(F5JBR)
M42b	14623	17-12	0814	Thu	Traffic in FSK and opchat in CW: QRU QRV KNIL S	FSK 50/500	(F5JBR)
M42b	14623	19-12	0814	Sat	K9VE wkg IC8U (Message FSK 50/500 and ops chat in Morse)	CW	(F5JBR)
M42b	15621	17-12	0800	Thu	Traffic in FSK and opchat in CW: OK QSW 89931 K	FSK 50/500	(F5JBR)
M42b	18049	19-12	0816	Sat	IC8U wkg K9VE. QSA NO QSY 11481	CW	(F5JBR)
M42c	3861	3-12	2020	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	3861	10-12	2020	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	3861	17-12	2020	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	4029	1-12	2000	Tue	Russian diplo/intel. =8321 75488015891171573 ... )57614200000+++++++132	FSK 200/500	(Danix)
M42c	4469	5-12	1830	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	4469	12-12	1830	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	4469	26-12	1830	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	4575	3-12	2010	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	4575	10-12	2010	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	4575	17-12	2010	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	5326	1-12	2020	Tue	Russian diplo/intel. =8321 75488015891171573 ... )57614200000+++++++132	FSK 200/500	(Danix)
M42c	5782	3-12	2000	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/HFD)
M42c	5782	10-12	2000	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	5782	17-12	2000	Thu	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	6822	5-12	1820	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	6822	12-12	1820	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	6822	26-12	1820	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	7682	1-12	2040	Tue	Russian diplo/intel. =8321 75488015891171573 ... )57614200000+++++++132	FSK 200/500	(Danix)
M42c	8014	1-12	1035	Tue	Russian diplo/intel. =8041 8161108742269652 ... )57655 00000+++++++151	FSK 200/500	(AB/Danix)
M42c	8014	2-12	1035	Wed	Russian diplo/intel. Msg ends with )57614500000+++++++213	FSK 200/500	(AB/Danix)
M42c	8014	3-12	1035	Thu	Russian diplo/intel. 2 msgs =8761 78507871718305343 ends with )57655 00000+++++++151	FSK 200/500	(AB/Danix)
M42c	8014	4-12	1035	Fri	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	8014	7-12	1035	Mon	Russian diplo/intel. =8631 17481701587733772 ... )7641382941100000+++++224	FSK 200/500	(AB)
M42c	8014	8-12	1035	Tue	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++++13	FSK 200/500	(AB)
M42c	8014	9-12	1035	Wed	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++++13	FSK 200/500	(AB)
M42c	8014	10-12	1035	Thu	Russian diplo/intel. =7881 87870841106790479 ... )74064 3409900000+++++186	FSK 200/500	(AB)
M42c	8014	11-12	1035	Fri	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	8014	14-12	1035	Mon	Russian diplo/intel. =8541 76694740581524083 ... )6941483544100000+++++213	FSK 200/500	(AB)
M42c	8014	16-12	1035	Wed	Russian diplo/intel. =8701 70151632565944271 ... )57614700000+++++++131	FSK 200/500	(AB)
M42c	8014	17-12	1035	Thu	Russian diplo/intel. =8381 41030353890790239 ... )57667 00000+++++++166 2 messages	FSK 200/500	(AB)
M42c	8014	18-12	1035	Fri	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	8014	21-12	1035	Mon	Russian diplo/intel. =8431 85964379505350260 ... )581142+++++++125	FSK 200/500	(AB)
M42c	8014	22-12	1035	Tue	Russian diplo/intel. =8051 415601695073048108 ... )71258 4309100000+++++188	FSK 200/500	(AB)
M42c	8014	23-12	1035	Wed	Russian diplo/intel. =8931 14751595256955837 ... )581144+++++++91	FSK 200/500	(AB/Danix)
M42c	8014	24-12	1035	Thu	Russian diplo/intel. =8511 31475925520086045 ... )71562 4609300000+++++217 (2 messages)	FSK 200/500	(AB)
M42c	8014	25-12	1035	Fri	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	8014	28-12	1035	Mon	Russian diplo/intel. =8021 39916741536497668 ... )57614700000+++++++131	FSK 200/500	(AB)



Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42c	8014	29-12	1035	Tue	Russian diplo/intel. =8241 35193721600853772 ... )58156 ++++++93 (2 messages)	FSK 200/500	(AB/Danix)
M42c	8014	30-12	1035	Wed	Russian diplo/intel. (2181110009777436712905004439 =8381 77607177255243385 ... )7491485044100000+++++171	FSK 200/500	(AB)
M42c	8014	31-12	1035	Thu	Russian diplo/intel. =8401 924416595611395146 ... )58156 ++++++93	FSK 200/500	(AB)
M42c	8129	5-12	1810	Sat	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	8129	12-12	1810	Sat	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	8129	26-12	1810	Sat	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	10334	1-12	1025	Tue	Russian diplo/intel. =8041 8161108742269652 ... )57655 00000+++++151	FSK 200/500	(AB/Danix)
M42c	10334	2-12	1025	Wed	Russian diplo/intel. Msg ends with )57614500000+++++213	FSK 200/500	(AB/Danix)
M42c	10334	3-12	1025	Thu	Russian diplo/intel. 2 msgs =8761 78507871718305343 ends with )57655 00000+++++151	FSK 200/500	(AB/Danix)
M42c	10334	4-12	1025	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	10334	7-12	1025	Mon	Russian diplo/intel. =8631 17481701587733772 ... )7641382941100000+++++224	FSK 200/500	(AB)
M42c	10334	8-12	1025	Tue	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++13	FSK 200/500	(AB)
M42c	10334	9-12	1025	Wed	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++13	FSK 200/500	(AB)
M42c	10334	10-12	1025	Thu	Russian diplo/intel. =7881 87870841106790479 ... )74064 3409900000+++++186	FSK 200/500	(AB)
M42c	10334	11-12	1025	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	10334	14-12	1025	Mon	Russian diplo/intel. =8541 76694740581524083 ... )6941483544100000+++++213	FSK 200/500	(AB)
M42c	10334	16-12	1025	Wed	Russian diplo/intel. =8701 70151632565944271 ... )57614700000+++++131	FSK 200/500	(AB)
M42c	10334	17-12	1025	Thu	Russian diplo/intel. =8381 41030353890790239 ... )57667 00000+++++166 2 messages	FSK 200/500	(AB)
M42c	10334	18-12	1025	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	10334	21-12	1025	Mon	Russian diplo/intel. =8431 85964379505350260 ... )581142+++++125	FSK 200/500	(AB)
M42c	10334	22-12	1025	Tue	Russian diplo/intel. =8051 415601695073048108 ... )71258 4309100000+++++188	FSK 200/500	(AB)
M42c	10334	23-12	1025	Wed	Russian diplo/intel. =8931 14751595256955837 ... )581144+++++91	FSK 200/500	(AB/Danix)
M42c	10334	24-12	1025	Thu	Russian diplo/intel. =8511 31475925520086045 ... )71562 4609300000+++++217 (2 messages)	FSK 200/500	(AB)
M42c	10334	25-12	1025	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	10334	28-12	1025	Mon	Russian diplo/intel. =8021 39916741536497668 ... )57614700000+++++131	FSK 200/500	(AB)
M42c	10334	29-12	1025	Tue	Russian diplo/intel. =8241 35193721600853772 ... )58156 ++++++93 (2 messages)	FSK 200/500	(AB/Danix)
M42c	10334	30-12	1025	Wed	Russian diplo/intel. (2181110009777436712905004439 =8381 77607177255243385 ... )7491485044100000+++++171	FSK 200/500	(AB)
M42c	10334	31-12	1025	Thu	Russian diplo/intel. =8401 924416595611395146 ... )58156 ++++++93	FSK 200/500	(AB)
M42c	12162	1-12	1010	Tue	Russian diplo/intel. Tests RYRYRY	FSK 200/500	(AB)
M42c	12162	1-12	1015	Tue	Russian diplo/intel. =8041 8161108742269652 ... )57655 00000+++++151	FSK 200/500	(AB/Danix)
M42c	12162	2-12	1015	Wed	Russian diplo/intel. Msg ends with )57614500000+++++213	FSK 200/500	(AB/Danix)
M42c	12162	3-12	1015	Thu	Russian diplo/intel. 2 msgs =8761 78507871718305343 ends with )57655 00000+++++151	FSK 200/500	(AB/Danix)
M42c	12162	4-12	1015	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	12162	7-12	1015	Mon	Russian diplo/intel. =8631 17481701587733772 ... )7641382941100000+++++224	FSK 200/500	(AB)
M42c	12162	8-12	1015	Tue	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++13	FSK 200/500	(AB)
M42c	12162	9-12	1015	Wed	Russian diplo/intel. =8301 32613504480305699 ... )58161 ++++++13	FSK 200/500	(AB)
M42c	12162	10-12	1015	Thu	Russian diplo/intel. =7881 87870841106790479 ... )74064 3409900000+++++186	FSK 200/500	(AB)
M42c	12162	11-12	1015	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	12162	14-12	1015	Mon	Russian diplo/intel. =8541 76694740581524083 ... )6941483544100000+++++213	FSK 200/500	(AB)
M42c	12162	16-12	1015	Wed	Russian diplo/intel. =8701 70151632565944271 ... )57614700000+++++131	FSK 200/500	(AB)
M42c	12162	17-12	1015	Thu	Russian diplo/intel. =8381 41030353890790239 ... )57667 00000+++++166 2 messages	FSK 200/500	(AB)
M42c	12162	18-12	1015	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	12162	21-12	1015	Mon	Russian diplo/intel. =8431 85964379505350260 ... )581142+++++125	FSK 200/500	(AB)
M42c	12162	22-12	1015	Tue	Russian diplo/intel. =8051 415601695073048108 ... )71258 4309100000+++++188	FSK 200/500	(AB)
M42c	12162	23-12	1015	Wed	Russian diplo/intel. =8931 14751595256955837 ... )581144+++++91	FSK 200/500	(AB/Danix)
M42c	12162	24-12	1015	Thu	Russian diplo/intel. =8511 31475925520086045 ... )71562 4609300000+++++217 (2 messages)	FSK 200/500	(AB)
M42c	12162	25-12	1015	Fri	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB)
M42c	12162	28-12	1015	Mon	Russian diplo/intel. =8021 39916741536497668 ... )57614700000+++++131	FSK 200/500	(AB)
M42c	12162	29-12	1015	Tue	Russian diplo/intel. =8241 35193721600853772 ... )58156 ++++++93 (2 messages)	FSK 200/500	(AB/Danix)
M42c	12162	30-12	1015	Wed	Russian diplo/intel. (2181110009777436712905004439 =8381 77607177255243385 ... )7491485044100000+++++171	FSK 200/500	(AB)
M42c	12162	31-12	1015	Thu	Russian diplo/intel. =8401 924416595611395146 ... )58156 ++++++93	FSK 200/500	(AB)
M42c	16105	5-12	1320	Sat	Russian diplo/intel. )5761 00000+++++162	FSK 200/500	(AB/F5JBR)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
M42c	16105	12-12	1320	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/HFD)
M42c	16105	19-12	1320	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	16105	26-12	1320	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	18192	5-12	1310	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/F5JBR)
M42c	18192	12-12	1310	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/HFD)
M42c	18192	19-12	1310	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	18192	26-12	1310	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	20560	5-12	1300	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/F5JBR)
M42c	20560	12-12	1300	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB/HFD)
M42c	20560	19-12	1300	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42c	20560	26-12	1300	Sat	Russian diplo/intel. )5761 00000+++++++162	FSK 200/500	(AB)
M42d	4036	8-12	2320	Tue	Russian diplo/intel. Msg 002 on link 40988	FSK 200/1000	(AB)
M42d	4036	15-12	2320	Tue	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(AB/Danix)
M42d	4519	16-12	0250	Wed	Russian diplo/intel. Msg 232 on link 45141	FSK 200/1000	(AB)
M42d	4538	7-12	0520	Mon	Russian diplo/intel. Msg on link 45079	FSK 200/1000	(Danix)
M42d	4538	21-12	0520	Mon	Russian diplo/intel. Msg 020 on link 45079, Date 18th	FSK 200/1000	(Danix/F5JBR)
M42d	5212	16-12	0240	Wed	Russian diplo/intel. Msg 232 on link 45141	FSK 200/1000	(AB)
M42d	5267	1-12	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	5267	8-12	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	5267	15-12	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	5267	22-12	1710	Tue	Russian diplo/intel. Msg 147 on link 20501	FSK 200/1000	(AB)
M42d	5267	29-12	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	5787	3-12	1220	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	5787	7-12	1220	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	5787	8-12	1220	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	5787	9-12	1220	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	5787	10-12	1220	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	5787	16-12	1220	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	5787	17-12	1220	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	5787	21-12	1220	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	5787	22-12	1220	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)
M42d	5787	23-12	1220	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	5787	24-12	1220	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix)
M42d	5787	28-12	1220	Mon	Russian diplo/intel. Msg 005 on link 45137	FSK 200/1000	(AB)
M42d	5787	29-12	1220	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	5787	30-12	1220	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)
M42d	5787	31-12	1220	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	5864	1-12	2320	Tue	Russian diplo/intel. Msg 002 on link 40988	FSK 200/1000	(AB)
M42d	5864	22-12	2320	Tue	Russian diplo/intel. Msg 160 on link 40988	FSK 200/1000	(AB/MPJ)
M42d	5913	16-12	1150	Wed	Russian diplo/intel. One message: Link ID 00000, Date 16th, Serial #222	FSK 200/1000	(Danix)
M42d	6787	1-12	2310	Tue	Russian diplo/intel. Msg 002 on link 40988	FSK 200/1000	(AB)
M42d	6787	15-12	2310	Tue	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(Danix)
M42d	6787	22-12	2310	Tue	Russian diplo/intel. Msg 160 on link 40988	FSK 200/1000	(AB)
M42d	6796	7-12	0510	Mon	Russian diplo/intel. Msg on link 45079	FSK 200/1000	(Danix)
M42d	6796	21-12	0510	Mon	Russian diplo/intel. Msg 020 on link 45079, Date 18th	FSK 200/1000	(Danix)
M42d	6812	18-12	0620	Fri	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(AB)
M42d	7477	1-12	0720	Tue	Russian diplo/intel. Msg 195 on link 45136	FSK 200/1000	(AB)
M42d	7477	2-12	0720	Wed	Russian diplo/intel. Msg 200 on link 45137	FSK 200/1000	(AB)
M42d	7477	3-12	0720	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	7477	4-12	0720	Fri	Russian diplo/intel. Msg 035 on link 45137	FSK 200/1000	(AB)
M42d	7477	7-12	0720	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	7477	8-12	0720	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	7477	9-12	0720	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	7477	10-12	0720	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	7477	11-12	0720	Fri	Russian diplo/intel. Msg 142 on link 45136	FSK 200/1000	(AB)
M42d	7477	14-12	0720	Mon	Russian diplo/intel. Msg 222 on link 45136	FSK 200/1000	(AB)
M42d	7477	15-12	0720	Tue	Russian diplo/intel. Msg 225 on link 45136	FSK 200/1000	(AB)
M42d	7477	16-12	0720	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	7477	17-12	0720	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	7477	18-12	0720	Fri	Russian diplo/intel. Msg 017 on link 45137	FSK 200/1000	(AB)
M42d	7477	21-12	0720	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	7477	22-12	0720	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
M42d	7477	23-12	0720	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	7477	24-12	0720	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix)
M42d	7477	25-12	0720	Fri	Russian diplo/intel. Msg 032 on link 45136	FSK 200/1000	(AB/Danix)
M42d	7477	29-12	0720	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	7477	30-12	0720	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)
M42d	7477	31-12	0720	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	7622	1-12	1210	Tue	Russian diplo/intel. Msg 195 on link 45136	FSK 200/1000	(AB)
M42d	7622	2-12	1210	Wed	Russian diplo/intel. Msg 200 on link 45137	FSK 200/1000	(AB)
M42d	7622	3-12	1210	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	7622	7-12	1210	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	7622	8-12	1210	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	7622	9-12	1210	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	7622	10-12	1210	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	7622	16-12	1210	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	7622	17-12	1210	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	7622	21-12	1210	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	7622	22-12	1210	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)
M42d	7622	23-12	1210	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	7622	24-12	1210	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix)
M42d	7622	28-12	1210	Mon	Russian diplo/intel. Msg 005 on link 45137	FSK 200/1000	(AB)
M42d	7622	29-12	1210	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	7622	30-12	1210	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)
M42d	7622	31-12	1210	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	7827	13-12	1550	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7827	20-12	1550	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7827	27-12	1550	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7827	27-12	1550	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7843	1-12	1700	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7843	8-12	1700	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7843	15-12	1700	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7843	22-12	1700	Tue	Russian diplo/intel. Msg 147 on link 20501	FSK 200/1000	(MPJ)
M42d	7843	29-12	1700	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7992	16-12	1200	Wed	Russian diplo/intel. One message: Link ID 00000, Date 16th, Serial #222	FSK 200/1000	(Danix)
M42d	8046	1-12	2300	Tue	Russian diplo/intel. Msg 002 on link 40988	FSK 200/1000	(AB)
M42d	8046	15-12	2300	Tue	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(Danix)
M42d	8046	22-12	2300	Tue	Russian diplo/intel. Msg 160 on link 40988	FSK 200/1000	(AB)
M42d	8054	21-12	0500	Mon	Russian diplo/intel. Msg 020 on link 45079, Date 18th	FSK 200/1000	(Danix)
M42d	8166	17-12	1350	Thu	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	8166	18-12	1350	Fri	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	8166	31-12	1350	Thu	Russian diplo/intel. Msg 067 on link 49237	FSK 200/1000	(AB)
M42d	9063	1-12	0710	Tue	Russian diplo/intel. Msg 195 on link 45136	FSK 200/1000	(AB)
M42d	9063	2-12	0710	Wed	Russian diplo/intel. Msg 200 on link 45137	FSK 200/1000	(AB)
M42d	9063	3-12	0710	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	9063	4-12	0710	Fri	Russian diplo/intel. Msg 035 on link 45137	FSK 200/1000	(AB)
M42d	9063	7-12	0710	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	9063	8-12	0710	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	9063	9-12	0710	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	9063	10-12	0710	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	9063	11-12	0710	Fri	Russian diplo/intel. Msg 142 on link 45136	FSK 200/1000	(AB)
M42d	9063	14-12	0710	Mon	Russian diplo/intel. Msg 222 on link 45136	FSK 200/1000	(AB)
M42d	9063	15-12	0710	Tue	Russian diplo/intel. Msg 225 on link 45136	FSK 200/1000	(AB)
M42d	9063	16-12	0710	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	9063	17-12	0710	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	9063	18-12	0710	Fri	Russian diplo/intel. Msg 017 on link 45137	FSK 200/1000	(AB)
M42d	9063	21-12	0710	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	9063	22-12	0710	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)
M42d	9063	23-12	0710	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	9063	24-12	0710	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix/PP A)
M42d	9063	25-12	0710	Fri	Russian diplo/intel. Msg 032 on link 45136	FSK 200/1000	(AB/Danix)
M42d	9063	29-12	0710	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	9063	30-12	0710	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)

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M42d	9063	31-12	0710	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	9176	1-12	1200	Tue	Russian diplo/intel. Msg 195 on link 45136	FSK 200/1000	(AB)
M42d	9176	2-12	1200	Wed	Russian diplo/intel. Msg 200 on link 45137	FSK 200/1000	(AB)
M42d	9176	3-12	1200	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	9176	7-12	1200	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	9176	8-12	1200	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	9176	9-12	1200	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	9176	10-12	1200	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	9176	16-12	1200	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	9176	17-12	1200	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	9176	21-12	1200	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	9176	22-12	1200	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)
M42d	9176	23-12	1200	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	9176	24-12	1200	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix)
M42d	9176	28-12	1200	Mon	Russian diplo/intel. Msg 005 on link 45137	FSK 200/1000	(AB)
M42d	9176	29-12	1200	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	9176	30-12	1200	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)
M42d	9176	31-12	1200	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	9226	1-12	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9226	8-12	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9226	15-12	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9226	29-12	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9344	13-12	1540	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB/PPA)
M42d	9344	20-12	1540	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9344	27-12	1540	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB/PPA)
M42d	9344	27-12	1540	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB/PPA/MPJ)
M42d	10362	17-12	1340	Thu	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	10362	18-12	1340	Fri	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	10362	31-12	1340	Thu	Russian diplo/intel. Msg 067 on link 49237	FSK 200/1000	(AB)
M42d	10687	16-12	1210	Wed	Russian diplo/intel. One message: Link ID 00000, Date 16th, Serial #222 //17478 kHz	FSK 200/1000	(Danix)
M42d	11044	1-12	0700	Tue	Russian diplo/intel. Msg 195 on link 45136	FSK 200/1000	(AB)
M42d	11044	2-12	0700	Wed	Russian diplo/intel. Msg 200 on link 45137	FSK 200/1000	(AB)
M42d	11044	3-12	0700	Thu	Russian diplo/intel. Msg 202 on link 45136	FSK 200/1000	(AB)
M42d	11044	4-12	0700	Fri	Russian diplo/intel. Msg 035 on link 45137	FSK 200/1000	(AB)
M42d	11044	7-12	0700	Mon	Russian diplo/intel. Msg 207 on link 45136	FSK 200/1000	(AB)
M42d	11044	8-12	0700	Tue	Russian diplo/intel. Msg 210 on link 45136	FSK 200/1000	(AB)
M42d	11044	9-12	0700	Wed	Russian diplo/intel. Msg 215 on link 45136	FSK 200/1000	(AB)
M42d	11044	10-12	0700	Thu	Russian diplo/intel. Msg 217 on link 45137	FSK 200/1000	(AB)
M42d	11044	11-12	0700	Fri	Russian diplo/intel. Msg 142 on link 45136	FSK 200/1000	(AB)
M42d	11044	14-12	0700	Mon	Russian diplo/intel. Msg 222 on link 45136	FSK 200/1000	(AB)
M42d	11044	15-12	0700	Tue	Russian diplo/intel. Msg 225 on link 45136	FSK 200/1000	(AB)
M42d	11044	16-12	0700	Wed	Russian diplo/intel. Msg 230 on link 45136	FSK 200/1000	(AB)
M42d	11044	17-12	0700	Thu	Russian diplo/intel. Msg 232 on link 45136	FSK 200/1000	(AB)
M42d	11044	18-12	0700	Fri	Russian diplo/intel. Msg 017 on link 45137	FSK 200/1000	(AB)
M42d	11044	21-12	0700	Mon	Russian diplo/intel. Msg 237 on link 45136	FSK 200/1000	(AB)
M42d	11044	22-12	0700	Tue	Russian diplo/intel. Msg 240 on link 45137	FSK 200/1000	(AB)
M42d	11044	23-12	0700	Wed	Russian diplo/intel. Msg 245 on link 45137	FSK 200/1000	(AB/Danix)
M42d	11044	24-12	0700	Thu	Russian diplo/intel. Msg 247 on link 45136	FSK 200/1000	(AB/Danix)
M42d	11044	25-12	0700	Fri	Russian diplo/intel. Msg 032 on link 45136	FSK 200/1000	(AB/Danix)
M42d	11044	29-12	0700	Tue	Russian diplo/intel. Msg 007 on link 45136	FSK 200/1000	(AB)
M42d	11044	30-12	0700	Wed	Russian diplo/intel. Msg 012 on link 45136	FSK 200/1000	(AB)
M42d	11044	31-12	0700	Thu	Russian diplo/intel. Msg 015 on link 45137	FSK 200/1000	(AB)
M42d	11082	13-12	1530	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	11082	20-12	1530	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	11082	27-12	1530	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	11082	27-12	1530	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	12167	17-12	1330	Thu	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	12167	18-12	1330	Fri	Russian diplo/intel. Msg 050 on link 49237	FSK 200/1000	(AB/Danix)
M42d	12167	31-12	1330	Thu	Russian diplo/intel. Msg 067 on link 49237	FSK 200/1000	(AB)
M42d	13517	5-12	1120	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB)
M42d	13517	6-12	1120	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/MPJ)
M42d	13517	12-12	1120	Sat	Russian diplo/intel. Msg 082 on link 36882	FSK 200/1000	(AB/MPJ)

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M42d	13517	13-12	1120	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/Danix)
M42d	13517	19-12	1120	Sat	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB/Danix/MPJ)
M42d	13517	20-12	1120	Sun	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB)
M42d	13517	26-12	1120	Sat	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB/Danix)
M42d	13517	27-12	1120	Sun	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB)
M42d	13521	1-12	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/F5JBR)
M42d	13521	8-12	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	13521	15-12	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	13521	22-12	1420	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	13521	29-12	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/MPJ)
M42d	13885	16-12	1250	Wed	Russian diplo/intel. Msg 002 on link 53277	FSK 200/1000	(AB/Danix)
M42d	14367	13-12	0920	Sun	Russian diplo/intel. Msg 055 on link 45114	FSK 200/1000	(AB/Danix/F5JBR)
M42d	14367	26-12	0920	Sat	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB/Danix)
M42d	14367	27-12	0920	Sun	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB)
M42d	15631	5-12	1110	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB)
M42d	15631	6-12	1110	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/MPJ)
M42d	15631	12-12	1110	Sat	Russian diplo/intel. Msg 082 on link 36882	FSK 200/1000	(AB)
M42d	15631	13-12	1110	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/Danix)
M42d	15631	19-12	1110	Sat	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB/Danix/MPJ)
M42d	15631	20-12	1110	Sun	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB)
M42d	15631	26-12	1110	Sat	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB/Danix)
M42d	15631	27-12	1110	Sun	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB)
M42d	15836	2-12	1240	Wed	Russian diplo/intel. Msg 002 on link 53277	FSK 200/1000	(AB)
M42d	15836	16-12	1240	Wed	Russian diplo/intel. Msg 002 on link 53277	FSK 200/1000	(AB/Danix)
M42d	15872	1-12	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/F5JBR)
M42d	15872	8-12	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	15872	15-12	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	15872	22-12	1410	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	15872	29-12	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/MPJ)
M42d	16125	13-12	0910	Sun	Russian diplo/intel. Msg 055 on link 45114	FSK 200/1000	(AB/Danix/F5JBR)
M42d	16125	26-12	0910	Sat	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB/Danix)
M42d	16125	27-12	0910	Sun	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB)
M42d	16194	26-12	1520	Sat	Russian diplo/intel. Msg 057 on link 32821	FSK 200/1000	(AB)
M42d	16311	16-12	0820	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB/Danix)
M42d	16311	23-12	0820	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB)
M42d	16311	30-12	0820	Wed	Russian diplo/intel. Msg 117 on link 45075	FSK 200/1000	(AB)
M42d	16312	12-12	1020	Sat	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	16312	13-12	1020	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix/F5JBR)
M42d	16312	26-12	1020	Sat	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix)
M42d	16312	27-12	1020	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB)
M42d	16346	9-12	1035	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	16346	23-12	1035	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	16349	9-12	0920	Wed	Russian diplo/intel. Msg 002 on link 16404	FSK 200/1000	(AB)
M42d	16349	23-12	0920	Wed	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	16349	24-12	0920	Thu	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	17444	1-12	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/F5JBR)
M42d	17444	8-12	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	17444	15-12	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	17444	22-12	1400	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	17444	29-12	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB/MPJ)
M42d	17461	2-12	1020	Wed	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	17461	9-12	1020	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	17461	16-12	1020	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	17461	30-12	1020	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	17476	16-12	1230	Wed	Russian diplo/intel. Msg 002 on link 53277	FSK 200/1000	(AB/Danix)
M42d	17478	16-12	1210	Wed	Russian diplo/intel. One message: Link ID 00000, Date 16th, Serial #222 //10687 kHz	FSK 200/1000	(Danix)
M42d	17532	5-12	1100	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB)
M42d	17532	6-12	1100	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/MPJ)

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M42d	17532	12-12	1100	Sat	Russian diplo/intel. Msg 082 on link 36882	FSK 200/1000	(AB)
M42d	17532	13-12	1100	Sun	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/Danix)
M42d	17532	19-12	1100	Sat	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB/Danix/MPJ)
M42d	17532	20-12	1100	Sun	Russian diplo/intel. Msg 085 on link 36882	FSK 200/1000	(AB)
M42d	17532	26-12	1100	Sat	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB/Danix)
M42d	17532	27-12	1100	Sun	Russian diplo/intel. Msg 087 on link 36882	FSK 200/1000	(AB)
M42d	17576	2-12	1230	Wed	Russian diplo/intel. Msg 002 on link 53277	FSK 200/1000	(AB)
M42d	18189	13-12	0900	Sun	Russian diplo/intel. Msg 055 on link 45114	FSK 200/1000	(AB/Danix/F5JBR)
M42d	18189	26-12	0900	Sat	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB/Danix)
M42d	18189	27-12	0900	Sun	Russian diplo/intel. Msg 057 on link 45114	FSK 200/1000	(AB)
M42d	18292	16-12	0810	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB/Danix)
M42d	18292	23-12	0810	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB)
M42d	18292	30-12	0810	Wed	Russian diplo/intel. Msg 117 on link 45075	FSK 200/1000	(AB)
M42d	18481	26-12	1510	Sat	Russian diplo/intel. Msg 057 on link 32821	FSK 200/1000	(AB)
M42d	18483	19-12	1510	Sat	Russian diplo/intel. Msg Null message on Link ID 32821	FSK 200/1000	(Danix)
M42d	18617	9-12	1025	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	18617	23-12	1025	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	18641	12-12	1010	Sat	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	18641	13-12	1010	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix/F5JBR)
M42d	18641	26-12	1010	Sat	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix)
M42d	18641	27-12	1010	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB)
M42d	18721	9-12	0910	Wed	Russian diplo/intel. Msg 002 on link 16404	FSK 200/1000	(AB)
M42d	18721	23-12	0910	Wed	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	18721	24-12	0910	Thu	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	19137	2-12	1010	Wed	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	19137	9-12	1010	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	19137	16-12	1010	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	19137	30-12	1010	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	20646	26-12	1500	Sat	Russian diplo/intel. Msg 057 on link 32821	FSK 200/1000	(AB)
M42d	20836	16-12	0800	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB/Danix)
M42d	20836	23-12	0800	Wed	Russian diplo/intel. Msg 057 on link 45075	FSK 200/1000	(AB)
M42d	20836	30-12	0800	Wed	Russian diplo/intel. Msg 117 on link 45075	FSK 200/1000	(AB)
M42d	20892	9-12	0900	Wed	Russian diplo/intel. Msg 002 on link 16404	FSK 200/1000	(AB)
M42d	20892	23-12	0900	Wed	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	20892	24-12	0900	Thu	Russian diplo/intel. Msg 235 on link 16404	FSK 200/1000	(AB)
M42d	20949	12-12	1000	Sat	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	20949	13-12	1000	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix/F5JBR)
M42d	20949	26-12	1000	Sat	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB/Danix)
M42d	20949	27-12	1000	Sun	Russian diplo/intel. Msg 195 on link 45057	FSK 200/1000	(AB)
M42d	20961	9-12	1015	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	20961	23-12	1015	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	20981	2-12	1000	Wed	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	20981	9-12	1000	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	20981	16-12	1000	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M42d	20981	30-12	1000	Wed	Russian diplo/intel. Msg 110 on link 49202	FSK 200/1000	(AB)
M51a	6825	2-12	1341	Wed	FAV22: Mixed traffic.	CW	(MPJ)
M51a	6825	9-12	1325	Wed	FAV22: 372628 BXC DFSTA 18649 NXJDY QKLIH ...	CW	(MPJ)
M51a	6825	21-12	1055	Mon	FAV22: French Morse Practice 1055 CW Mixed 5FG/5LGs.	CW	(MPJ)
M89	3330	1-12	1025	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	2-12	1713	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	2-12	2113	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	3-12	1703	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	4-12	1342	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	5-12	1913	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	6-12	1256	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	7-12	2159	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	8-12	1205	Tue	i.p. NR /4059 III BT 4.1.9/0379/2033/237NR.4..9 AR	CW	(JPL)
M89	3330	8-12	1750	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)

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M89	3330	9-12	1907	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	9-12	2222	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	10-12	1917	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	10-12	2253	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	11-12	1650	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	12-12	1104	Sat	V MW3D (x3) DE 2SLC (x2) Switched from 5588	CW	(JPL)
M89	3330	12-12	1729	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	12-12	2058	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	13-12	1358	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	13-12	1701	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	13-12	1908	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	14-12	1329	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	15-12	1106	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	15-12	1554	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	15-12	1938	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	16-12	1829	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	17-12	1852	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	17-12	2228	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	18-12	1119	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	23-12	2019	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	24-12	2040	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	24-12	2040	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	25-12	1628	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	26-12	1734	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	27-12	1915	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	28-12	1226	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	29-12	1634	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	29-12	2208	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	30-12	2343	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	31-12	1245	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3333	17-12	1900	Thu	i.p. 5N3A D57N AT3U TANU TTA7 DUN3 AT64 AR	CW	(JPL)
M89	3368	1-12	1655	Tue	H7JS comms checks and QTCs with Q2WS	CW	(F5JBR)
M89	3642	2-12	0030	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	2-12	1714	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	2-12	1748	Wed	DKG6 de 3A7D V	CW	(F5JBR)
M89	3642	3-12	0032	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	3-12	1705	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	4-12	0143	Fri	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	4-12	1344	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	5-12	1914	Sat	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	5-12	1920	Sat	V DKG6 (x3) DE 3A7D (x2) //5630	CW	(JPL)
M89	3642	5-12	2339	Sat	V DKG6 (x3) DE 3A7D (x2) //5630	CW	(JPL)
M89	3642	6-12	1353	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	6-12	1912	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	7-12	2212	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	8-12	1235	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	8-12	1752	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	8-12	2335	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	9-12	0300	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	3642	9-12	2237	Wed	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	10-12	2254	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	11-12	1704	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	12-12	1931	Sat	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	12-12	2101	Sat	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	13-12	1650	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	13-12	1909	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	14-12	1501	Mon	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	14-12	1907	Mon	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	15-12	1549	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	15-12	1936	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	16-12	1836	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	17-12	1854	Thu	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	3642	17-12	2229	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	18-12	1636	Fri	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	23-12	2039	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	24-12	2054	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	25-12	1631	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	26-12	1742	Sat	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	27-12	1916	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	27-12	1944	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	28-12	1255	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	28-12	1317	Mon	i.p. RMKS 2906 TO 2000 2037 2936 2381 2067 = 637N 55NU UNA3 4ADN 7DN3 6UD6 ...	CW	(JPL)
M89	3642	29-12	1654	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	30-12	2348	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3765	23-12	1711	Wed	M8JF de RIS9 V	CW	(F5JBR)
M89	3765	23-12	2040	Wed	i.p. 565T U75U .66. A775 N434 NA67 6U55 AR	CW	(JPL)
M89	3767	13-12	1652	Sun	V M8JF (x3) DE RIS9 (x2) //3787 and 4532	CW	(JPL)
M89	3767	13-12	1911	Sun	V M8JF (x3) DE RIS9 (x2) //3787 and 4532	CW	(JPL)
M89	3777	1-12	1030	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	1-12	1630	Tue	M8JF de RIS9 V	CW	(F5JBR)
M89	3777	2-12	1715	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	3-12	1117	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	3777	3-12	1706	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	4-12	1004	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	5-12	1915	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	6-12	1300	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	7-12	2201	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	8-12	1113	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	8-12	1753	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	8-12	1857	Tue	i.p. UGT COMM BT 903/6854/6232/12/09/0325/227/A/23/74 AR	CW	(JPL)
M89	3777	8-12	2329	Tue	V M8JF (x3) DE RIS9 (x2) //4532 6793 and 8060	CW	(JPL)
M89	3777	9-12	0953	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	9-12	1909	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	9-12	2226	Wed	V M8JF (x3) DE RIS9 (x2) //4532 and 6793	CW	(JPL)
M89	3777	10-12	1919	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	3777	10-12	2255	Thu	V M8JF (x3) DE RIS9 (x2) //4532 6793 and 8060	CW	(JPL)
M89	3777	11-12	1653	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	12-12	1100	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	12-12	1731	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	12-12	2103	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	14-12	1332	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	14-12	1905	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	15-12	1108	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	15-12	1558	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	15-12	1939	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	16-12	1856	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	17-12	1858	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	17-12	2231	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	18-12	1122	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	23-12	2040	Wed	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	3777	24-12	2041	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	24-12	2056	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	3777	25-12	1636	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	26-12	1737	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	27-12	1917	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	28-12	1228	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	29-12	2210	Tue	V M8JF (x3) DE RIS9 (x2) //3797 and 4532	CW	(JPL)
M89	3777	31-12	1247	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3787	13-12	1652	Sun	V M8JF (x3) DE RIS9 (x2) //3767 and 4532	CW	(JPL)
M89	3787	13-12	1911	Sun	V M8JF (x3) DE RIS9 (x2) //3767 and 4532	CW	(JPL)
M89	3787	14-12	1336	Mon	i.p. T6N5 75UT DUAN U453 43ND TND7 36D4 = A3U5 4 BT A3 BT A3 BT A3U4 R BT A3U4 (Cont'd)	CW	(JPL)
M89	3797	24-12	2056	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)



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M89	3797	29-12	1635	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3797	29-12	2210	Tue	V M8JF (x3) DE RIS9 (x2) //3777 and 4532	CW	(JPL)
M89	3821	2-12	1716	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	3-12	1156	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	3-12	1707	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	4-12	1352	Fri	V DKSL DE DU = ? TU DU = ? TU DE DFM3 DFM3 V DKSL ALSK DE (c/s messed up)	CW	(JPL)
M89	3821	6-12	1307	Sun	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	7-12	2213	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	8-12	1910	Tue	V ALSK (x3) DE DKSL (x2) //5644. Note: Callsigns reversed in R/S.	CW	(JPL)
M89	3821	9-12	1910	Wed	V DUBT?TU (x3) DE DU6 (x2) //5644 Callsign messed up again	CW	(JPL)
M89	3821	9-12	2224	Wed	V DUBT?TU (x3) DE DU6 (x2) //5644 Callsign messed up again	CW	(JPL)
M89	3821	11-12	1655	Fri	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	12-12	1732	Sat	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	15-12	1607	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	16-12	1843	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	17-12	1856	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	17-12	2233	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	23-12	2025	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	24-12	2042	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	3821	25-12	1639	Fri	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	26-12	1738	Sat	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	27-12	1919	Sun	V DU BT ? TU (x3) DE TTU? BT (x2) callsign messed up //5644	CW	(JPL)
M89	3821	28-12	1229	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	29-12	2212	Tue	V DKSL (x3) DE ALSK (x2) //N/H	CW	(JPL)
M89	3821	30-12	2350	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	4131	2-12	2107	Wed	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	3-12	1714	Thu	V JKDJ (x3) DE DLBC (x2) Sending DLBC vice the usual SLBC.	CW	(JPL)
M89	4131	4-12	0142	Fri	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	4-12	1402	Fri	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	5-12	1921	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	5-12	2338	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	6-12	1351	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	7-12	2215	Mon	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	8-12	2333	Tue	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	9-12	1933	Wed	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	11-12	1705	Fri	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	12-12	1928	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	14-12	1459	Mon	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	17-12	1910	Thu	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	25-12	1654	Fri	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	26-12	1744	Sat	V JKDJ (x3) DE SLBC (x2) //4880	CW	(JPL)
M89	4131	27-12	1941	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	28-12	1250	Mon	i.p. 4D3A 6N57 36TD A4T7 5N64 AR QSL ? HR WK NR 0018 VV	CW	(JPL)
M89	4131	29-12	1655	Tue	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	30-12	2349	Wed	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4225	7-12	2203	Mon	i.p. UGT COMM BT 4477 TN AGN AGN UGT COMM BT 4477 0635 COMM 7027 AR	CW	(JPL)
M89	4225	8-12	1754	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4225	27-12	2313	Sun	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4225	28-12	1230	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4225	28-12	1332	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4225	31-12	1241	Thu	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4444	9-12	0957	Wed	i.p. WK NR 170 K SK SK	CW	(JPL)
M89	4532	1-12	1030	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	2-12	1715	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	3-12	1706	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	4-12	1004	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	5-12	1915	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	6-12	1300	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	7-12	2201	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	8-12	1113	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	8-12	1753	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	8-12	2329	Tue	V M8JF (x3) DE RIS9 (x2) //3777 6793 and 8060	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	4532	9-12	0953	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	9-12	1909	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	9-12	2226	Wed	V M8JF (x3) DE RIS9 (x2) //3777 and 6793	CW	(JPL)
M89	4532	10-12	1919	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	10-12	2255	Thu	V M8JF (x3) DE RIS9 (x2) //3777 6793 and 8060	CW	(JPL)
M89	4532	11-12	1653	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	12-12	1100	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	12-12	1731	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	12-12	2103	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	13-12	1401	Sun	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	4532	13-12	1659	Sun	V M8JF (x3) DE RIS9 (x2) //3767 and 3787	CW	(JPL)
M89	4532	13-12	1911	Sun	V M8JF (x3) DE RIS9 (x2) //3767 and 3787	CW	(JPL)
M89	4532	14-12	1332	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	14-12	1905	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	15-12	1108	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	15-12	1939	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	16-12	1856	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	17-12	1858	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	17-12	2231	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	18-12	1122	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	23-12	2023	Wed	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	4532	24-12	2041	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	25-12	1636	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	26-12	1737	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	27-12	1917	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	28-12	1228	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	29-12	1635	Tue	V M8JF (x3) DE RIS9 (x2) //3797	CW	(JPL)
M89	4532	29-12	2210	Tue	V M8JF (x3) DE RIS9 (x2) //3777 and 3797	CW	(JPL)
M89	4532	30-12	1331	Wed	M8JF de RIS9 V	CW	(F5JBR)
M89	4532	30-12	2013	Wed	v m8jf m8jf m8jf de ris9 ris9	CW	(WP3)
M89	4720	2-12	1730	Wed	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	2-12	2130	Wed	VVV WNF (x3) DE FXM (x2) QSA ? QSV K (2135z)	CW	(JPL)
M89	4720	3-12	1730	Thu	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	5-12	1930	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	5-12	2230	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	5-12	2330	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	6-12	1330	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	6-12	1830	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	9-12	1930	Wed	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	9-12	2230	Wed	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	10-12	1930	Thu	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	11-12	1730	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	11-12	2330	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	12-12	1730	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	13-12	1930	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	14-12	1330	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	14-12	1530	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	14-12	1930	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	15-12	1630	Tue	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	15-12	1930	Tue	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	16-12	1830	Wed	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	17-12	2230	Thu	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	18-12	1630	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	25-12	1630	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	25-12	1830	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	27-12	1930	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	28-12	1230	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	28-12	1330	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	29-12	1630	Tue	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4860	2-12	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	2-12	1720	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	2-12	2120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	4860	3-12	1120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	4-12	0020	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //684	CW	(JPL)
M89	4860	5-12	1920	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	5-12	2220	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	5-12	2320	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	6-12	1320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	6-12	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	6-12	2020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	8-12	2320	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	9-12	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	9-12	1120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	9-12	1920	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	10-12	1920	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	11-12	0020	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	11-12	1720	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	12-12	1120	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	12-12	2106	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840)	CW	(JPL)
M89	4860	13-12	1920	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	14-12	1520	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	14-12	1920	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	15-12	1620	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	18-12	1120	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	27-12	1920	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	28-12	1320	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	29-12	2220	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K	CW	(JPL)
M89	4880	26-12	1744	Sat	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	2-12	2107	Wed	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	4-12	0142	Fri	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	5-12	1921	Sat	V JKDj (x3) DE SLBC (x2) //6840	CW	(JPL)
M89	4886	5-12	2338	Sat	V JKDj (x3) DE SLBC (x2) //6840	CW	(JPL)
M89	4886	6-12	1351	Sun	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	7-12	2215	Mon	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	8-12	1756	Tue	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	4886	8-12	2333	Tue	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	9-12	1933	Wed	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	11-12	1658	Fri	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	4886	11-12	1705	Fri	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	14-12	1459	Mon	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	27-12	1941	Sun	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	29-12	1655	Tue	V JKDj (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	5042	6-12	1907	Sun	i.p. 44A5 TNND 4633 3U4. D6TN	CW	(JPL)
M89	5088	1-12	1104	Tue	VV J5VQ DE B8PQ K. VV F1UT DE B8PQ K. VV HMN7 DE B8PQ K	CW	(JPL)
M89	5119	6-12	1413	Sun	i.p. D4N4 5T6D 34DA AR (see N&O 219)	CW	(JPL)
M89	5120	6-12	1403	Sun	i.p. BT 791/C334/1452/86/00/5./301/COMM/9973A EEEEEEE	CW	(JPL)
M89	5177	1-12	1037	Tue	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	3-12	1157	Thu	V JKDj (x3) DE DLBC (x2) Sending DLBC vice the usual SLBC.	CW	(JPL)
M89	5177	4-12	1017	Fri	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	9-12	0326	Wed	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	9-12	1004	Wed	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	18-12	1230	Fri	V JKDj (x3) DE SLBC (x2)	CW	(JPL)
M89	5230	5-12	1929	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	5230	5-12	2339	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	5373	1-12	1045	Tue	i.p. HUG8 DE AOKY K K QSY NR 23 NR 23 K K (see N&O 219)	CW	(JPL)
M89	5373	1-12	1120	Tue	i.p. D6T5 DA74 7N46 3DU6 A674 TDU6 ANA4 DU7N AR K	CW	(JPL)
M89	5442	1-12	1115	Tue	i.p R RPT 55W = 46NN AR K. BOZ QSY 02 NR BOZ QSY 02 NR K. R OK OK	CW	(JPL)
M89	5450	6-12	1421	Sun	i.p. VV YOJS YOJS DE X9UN K (see N&O 219)	CW	(JPL)
M89	5462	4-12	1020	Fri	i.p. R RPT 42W K. R RPT 59W. R QSL 1820 K. R GA K	CW	(JPL)
M89	5474	4-12	1407	Fri	i.p. RMKS R640 TO W466 TO G468 TO Y464 TO D464 TO P464	CW	(JPL)
M89	5500	8-12	1115	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5555	6-12	1644	Sun	i.p. DADU DA6A 7336 D575 4536 D44N 45D4	CW	(JPL)
M89	5555	17-12	0823	Thu	i.p. NU74 7NDA 733T T575 NDTA 43U3 6NDN ... AR RR QSL 0800 K	CW	(JPL)
M89	5560	1-12	1111	Tue	i.p. 3N3T 5DN6 NAUT 76UN TNUU D5U6 5356 AR K. QSL 1912 K. R NIL SK GB	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	5560	1-12	1125	Tue	i.p. 2757 AR K. R HR NR 900 K. NR 5660 K. R NIL SK GB	CW	(JPL)
M89	5588	1-12	2351	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	2-12	0015	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	4-12	0030	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	4-12	1005	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	5-12	2323	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	8-12	1108	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	8-12	2337	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	9-12	0011	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	9-12	0955	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	10-12	1008	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	11-12	0026	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	11-12	0854	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	12-12	1040	Sat	i.p. III AN7D 6T66 VVV MSG NR 048 CK 301 44 1212 1830 =	CW	(JPL)
M89	5588	17-12	0819	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5644	1-12	1044	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	2-12	1716	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	3-12	1156	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	3-12	1707	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	4-12	1414	Fri	i.p. F NR 200./EX .210 KABC./ .NBA8	CW	(JPL)
M89	5644	5-12	1916	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	5-12	2321	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	6-12	1307	Sun	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	7-12	2208	Mon	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	7-12	2213	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	8-12	1111	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	8-12	1910	Tue	V ALSK (x3) DE DKSL (x2) //3821. Note: Callsigns reversed in R/S.	CW	(JPL)
M89	5644	9-12	1114	Wed	i.p. NR 54 0015 RMKS 38.2 TO 3420/3... COMM/...0/..262.2/3897/3.20 AR	CW	(JPL)
M89	5644	9-12	1910	Wed	V DUBT?TU (x3) DE DU6 (x2) //3821 Callsign messed up again	CW	(JPL)
M89	5644	9-12	2224	Wed	V DUBT?TU (x3) DE DU6 (x2) //3821 Callsign messed up again	CW	(JPL)
M89	5644	10-12	1921	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	10-12	2259	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	11-12	1655	Fri	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	12-12	1104	Sat	DE DKSL (x2) V (callsigns messed up again) Switched from 6421 at 1104z	CW	(JPL)
M89	5644	12-12	1732	Sat	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	13-12	1404	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	13-12	1915	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	14-12	1344	Mon	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	14-12	1904	Mon	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	15-12	1109	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	15-12	1607	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	15-12	1937	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	16-12	1843	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	17-12	1856	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	17-12	2233	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	18-12	1124	Fri	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	23-12	2025	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	25-12	1639	Fri	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	26-12	1738	Sat	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	27-12	1919	Sun	V DU BT ? TU (x3) DE TTU? BT (x2) (callsign messed up) //3821	CW	(JPL)
M89	5644	28-12	1229	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	30-12	2346	Wed	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	30-12	2350	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5801	1-12	1026	Tue	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	3-12	0306	Thu	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	3-12	1127	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	5801	4-12	1018	Fri	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	9-12	0300	Wed	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	5801	9-12	1011	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	15-12	0936	Tue	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	17-12	0832	Thu	i.p. 1600/..../ ... QSL ? K	CW	(JPL)
M89	5801	18-12	1228	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	5801	28-12	1255	Mon	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	6421	1-12	1028	Tue	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	4-12	0016	Fri	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	4-12	0940	Fri	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	8-12	2327	Tue	V ALSK (x3) DE DKSL (x2) Note: Callsigns reversed in R/S.	CW	(JPL)
M89	6421	9-12	0014	Wed	V ALSK (x3) DE DKSL (x2) //9131 Callsigns reversed	CW	(JPL)
M89	6421	9-12	0942	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	11-12	0030	Fri	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	11-12	0856	Fri	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	12-12	1102	Sat	DE DKSL (x2) V (callsigns messed up again) Switched to 5644 at 1104z	CW	(JPL)
M89	6421	31-12	0116	Thu	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6548	9-12	1026	Wed	i.p. 6N73 64UT 435D N37U TD.4 NDA5 A373	CW	(JPL)
M89	6579	9-12	0317	Wed	i.p. T67N 3A.5 57D4 TU56 4U7D DT34	CW	(JPL)
M89	6666	2-12	0025	Wed	i.p. 3U6T 4N6U 5T7D 3A4N 7T3D 5U6A ...	CW	(JPL)
M89	6666	4-12	1007	Fri	WNBJ DE X9UN (see N&O 219)	CW	(JPL)
M89	6666	8-12	1116	Tue	i.p. NUU3 7DU3 T674 TA3A U6N5 7N65 4AA4 TDNA (see N&O 215)	CW	(JPL)
M89	6666	11-12	0859	Fri	i.p. D4NU 63UA 4UT5 74NU D3N4 TAT6 45T4 ...	CW	(JPL)
M89	6775	5-12	2213	Sat	i.p. EX EX DE J1T55 J1T55 J1O55 VVV VVV J1T55 VVV VVV J1T55 VVV VVV J1T55 VA	CW	(JPL)
M89	6793	1-12	2349	Tue	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	2-12	0012	Wed	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	3-12	0050	Thu	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	4-12	0017	Fri	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	5-12	2322	Sat	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	8-12	2329	Tue	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 8060	CW	(JPL)
M89	6793	9-12	2226	Wed	V M8JF (x3) DE RIS9 (x2) //3777 and 4532	CW	(JPL)
M89	6793	10-12	2255	Thu	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 8060	CW	(JPL)
M89	6793	11-12	0027	Fri	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	17-12	0816	Thu	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	30-12	2344	Wed	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6834	2-12	0033	Wed	(i.p. 4N7U 66U3 6UND 567U .37U D46A 3.N5 N73T AR	CW	(JPL)
M89	6840	2-12	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	2-12	1720	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	2-12	2120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	3-12	1120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	4-12	0020	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //486	CW	(JPL)
M89	6840	4-12	0120	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //1064	CW	(JPL)
M89	6840	5-12	1920	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	5-12	2220	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	5-12	2320	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	6-12	1320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	6-12	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	6-12	2020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	7-12	2220	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K	CW	(JPL)
M89	6840	8-12	2320	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	9-12	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	9-12	1020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	9-12	1120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	9-12	1920	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	10-12	1020	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	10-12	1920	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	11-12	0020	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	11-12	0920	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	11-12	1720	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	12-12	1120	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	13-12	0120	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	13-12	1920	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	14-12	1520	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	14-12	1920	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	15-12	1620	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	17-12	0820	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	18-12	1120	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	27-12	1920	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	6840	28-12	0120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	28-12	1320	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	31-12	0120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	7602	2-12	0303	Wed	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	7602	4-12	0143	Fri	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	6-12	1912	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	7-12	2212	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	8-12	1235	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	9-12	2237	Wed	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	17-12	1854	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	18-12	1636	Fri	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	25-12	1837	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	7602	26-12	1742	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	27-12	1944	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	28-12	1255	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	28-12	1317	Mon	i.p. RMKS 2906 TO 2000 2037 2936 2381 2067 = 637N 55NU UNA3 4ADN 7DN3 6UD6 ...	CW	(JPL)
M89	7602	29-12	1654	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7777	15-12	1112	Tue	i.p. 7A65 D65A 633A 6U35 NDDT UTDN TD66 A4A3 III 2P = NNTD 3AAT AN6U 5UAU TND6 ...	CW	(JPL)
M89	7777	28-12	1540	Mon	i.p. F NR 13/EX 2339 RMKS 3002 TO 6071 = (see N&O 219)	CW	(JPL)
M89	8006	3-12	0102	Thu	i.p. PK4M PK4M DE NS3V NS3V NS3V K (see N&O 219)	CW	(JPL)
M89	8017	3-12	0110	Thu	i.p. UTD4 36A6 U44. UND3 ANUN AR K. R R QSL 0914 K	CW	(JPL)
M89	8017	18-12	1136	Fri	i.p. 5UAT 67N7 TAT4 TN53 NA56 6U37 3436	CW	(JPL)
M89	8060	1-12	2349	Tue	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	2-12	0012	Wed	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	3-12	0050	Thu	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	4-12	0017	Fri	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	5-12	2322	Sat	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	8-12	2329	Tue	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 6793	CW	(JPL)
M89	8060	9-12	0012	Wed	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	10-12	2255	Thu	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 6793	CW	(JPL)
M89	8060	11-12	0027	Fri	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	17-12	0816	Thu	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	30-12	2344	Wed	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8067	3-12	0033	Thu	i.p. 636T DN64 III = 3U77 3DA3 U5T5 AR K. 2P 66W = 6NA6 AR K	CW	(JPL)
M89	8067	3-12	0120	Thu	i.p. III = = U3AU 37AT 677T 4535 UAUD	CW	(JPL)
M89	8067	3-12	1133	Thu	i.p. 34T7 TU63 5A36 6A74 67.5 34UN	CW	(JPL)
M89	8110	28-12	0128	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	8888	27-12	0229	Sun	i.p. HR ZNN ? HR ZNN A HR A ? HR ZNN AHA (see N&O 219)	CW	(JPL)
M89	9131	1-12	1028	Tue	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	1-12	2350	Tue	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	2-12	0012	Wed	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	2-12	0254	Wed	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	3-12	0058	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	4-12	0016	Fri	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	4-12	0940	Fri	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	9-12	0014	Wed	V ALSK (x3) DE DKSL (x2) //6421 Callsigns reversed	CW	(JPL)
M89	9131	9-12	0942	Wed	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	10-12	0138	Thu	V DUBT?TU (x3) DE DU6 (x2) (callsigns messed up again) //10947	CW	(JPL)
M89	9131	10-12	1010	Thu	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	11-12	0030	Fri	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	11-12	0856	Fri	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	13-12	0125	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	15-12	0939	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	17-12	0814	Thu	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	28-12	0126	Mon	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	31-12	0116	Thu	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	10180	1-12	1026	Tue	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	3-12	0306	Thu	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	4-12	1018	Fri	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	9-12	1011	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	10180	15-12	0936	Tue	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	17-12	0832	Thu	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	31-12	1246	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	10640	4-12	0120	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //684	CW	(JPL)
M89	10640	9-12	1020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	10-12	1020	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	11-12	0920	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	13-12	0120	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	17-12	0820	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	28-12	0120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	31-12	0120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10919	9-12	0303	Wed	i.p. N5D7 4D.D AN4. T35N A34U 6TD5	CW	(JPL)
M89	10947	1-12	2350	Tue	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	2-12	0012	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	2-12	0254	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	10-12	0138	Thu	V DUBT?TU (x3) DE DU6 (x2) (callsigns messed up again) //9131	CW	(JPL)
M89	10947	10-12	1010	Thu	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	17-12	0814	Thu	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	28-12	0126	Mon	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M95	5555	9-12	1123	Wed	05 SK OK SK R GA K. 05 05 05 NR NR 4047 CK CK CK 801483 EEE 05 05 NR 409 CK CK 80 CCK R GA K	CW	(JPL-HK)
M95	7553	4-12	0943	Fri	i.p. 33D 4D3 TT. 773 3AD 353 4A5 N3D	CW	(MPJ)
M95	7553	10-12	0927	Thu	XSV70 i.p. 3D4 N3D 3D3 TT. 773 357 AR MSG GA	CW	(JPL-HK)
M95	7554	10-12	1001	Thu	i.p. 436 467 4D. 3D5 N3N 3D.	CW	(JPL-HK)
M95	8041	2-12	0053	Wed	i.p. 05 05 05	CW	(JPL-HK)
M95	8073	1-12	1140	Tue	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 1018 CK 316 35 1201 1603 = NR 1019 CK 39 ...	CW	(JPL-HK)
M95	8073	2-12	0006	Wed	V BNGC (x3) DE XSV85 (x2) HR 7G GA PSE CY NR 1020 CK 125 35 1202 0713 = TTU 3U4 3A4 TAU 773 TA7 ...	CW	(JPL-HK)
M95	8073	3-12	1145	Thu	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 1026 CK 28 35 1203 1629 = TAU N.U TT ...	CW	(JPL-Sib)
M95	8073	4-12	0006	Fri	V BNGC (x3) DE XSV85 (x2) HR MSG GA 7G GA NR 1028 CK 99 35 1204 0715 = TT4 3U4 3A4 TAU 773 TA7 773 ...	CW	(MPJ)
M95	8073	6-12	0008	Sun	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CPY NR 1036 CK 136 35 1206 07UA = TT6 3U4 3A4 TAU 773 TA7 773 TAD 773 TU3 ...	CW	(JPL-Sib)
M95	8073	7-12	0006	Mon	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 1040 CK 105 35 1207 0715 = TT7 3U4 3A4 TAU 773 TA7 773 ...	CW	(JPL-Sib)
M95	8073	8-12	1137	Tue	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 1046 CK 169 35 1208 1553 = TTD 3U6 33U TAU 773 TA7 773 354 ...	CW	(JPL-Sib)
M95	8073	9-12	0005	Wed	V BNGC (x3) DE XSV85 (x2) HR MSG GA NR 1048 CK 111 35 1209 0704 = TTN 3U4 3A4 TAU 773 TA7 773 354 365 ...	CW	(JPL-HK)
M95	8073	9-12	1136	Wed	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY MSG NR 1050 CK 168 35 1209 1558 = TTN 3U6 3AN 3U7 TAU 773 TA7 ...	CW	(JPL-HK)
M95	8073	10-12	0015	Thu	XSV85 i.p. NR 1054 CK 111 35 1211 0712 = TAA 3U4 3A. TAU 773 353 4T3 NN3 ... AR	CW	(JPL-HK)
M95	8073	10-12	1137	Thu	V BNGC (x3) DE XSV85 (x2) HR MSG GA PSE CY NR 1053 CK 268 35 1210 1609 = TAT 3U6 3AN 3U7 TAU 773 ...	CW	(JPL-HK)
M95	8073	12-12	0006	Sat	V BNGC (x3) DE XSV85 (x2) HR MSG GA PSE CY NR 1056 CK 96 35 1212 0716 = TAU 3U4 3A4 TAU 773 TA7 ...	CW	(JPL-HK)
M95	8073	12-12	1136	Sat	V BNGC (x3) DE XSV85 (x2) HR 7G GA NR 1057 CK 299 35 1212 1625 = TAU 3U6 3AN 3U7 TAU 773 TA7 773 ...	CW	(JPL-HK)
M95	8073	15-12	1140	Tue	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 1074 CK 270 35 1215 1610 = TA5 3U6 3AN 3U7 TAU 773 ...	CW	(JPL-HK)
M95	8073	16-12	0015	Wed	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY MSG NR 1078 CK 113 35 1216 0711 = TA6 3U4 3A4 TAU 773 TA7 ... AR	CW	(JPL-HK)
M95	8073	18-12	1152	Fri	V BNGC (x3) DE XSV85 (x2) 7G GA PSE CY NR NR 1095 CK 48 35 1218 1642 = TAU N5U TAD N53 TAD N54 7TT TAU 746 7T5 ...	CW	(JPL-HK)
M95	8073	28-12	0007	Mon	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CPY NR 1123 CK 129 35 1228 0709 = TUD 3U4 3A4 TAU 773 TA7 773 ...	CW	(JPL-HK)
M95	8073	31-12	0011	Thu	V BNGC (x3) DE XSV85 (x2) 7G NR 1136 CK 48 35 1231 0709 = TAU N5U T3A N53 TT6 N54 7TT TAT746 7T5 ...	CW	(JPL-HK)
MX	3168.5	8-12	1301	Tue	Beacon L	CW	(JCS)
MX	3168.5	8-12	2106	Tue	Beacon L	CW	(AB)
MX	3335	7-12	2223	Mon	Beacon V //3335//3658//5055.5 kHz	CW	(JCS)
MX	3335	8-12	1806	Tue	Beacon V	CW	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
MX	3593.8	9-12	1948	Wed	Beacon P, Kaliningrad	CW	(MPJ)
MX	3658	1-12	2052	Tue	Beacon V	CW	(MPJ)
MX	3658	7-12	2110	Mon	Beacon V //3335//3658//5055.5 kHz	CW	(AB)
MX	5055.5	7-12	2033	Mon	Beacon V //3335//3658//5055.5 kHz	CW	(JCS)
MX	5055.5	7-12	2110	Mon	Beacon V //3335//3658//5055.5 kHz	CW	(AB)
MX	5153.7	1-12	1956	Tue	Beacon D, Sevastopol	CW	(MPJ)
MX	5154	1-12	1957	Tue	Beacon C, Moscow	CW	(MPJ)
MX	5156.8	1-12	1958	Tue	Beacon L, St Peterburg	CW	(MPJ)
MX	8494.8	9-12	1233	Wed	Beacon P, Kaliningrad	CW	(MPJ)
MX	8494.9	9-12	1234	Wed	Beacon S, Severomorsk	CW	(MPJ)
MX	8495	9-12	1235	Wed	Beacon C, Moscow	CW	(MPJ)
MX	12044	23-12	1226	Wed	Beacon C	CW	(Danix)
MX	12044	23-12	1239	Wed	Beacon C	CW	(AB)
PAK	19889.7	3-12	1045	Thu	Pakistan Intel. ZCZC ISOKD PSLAP QZMAE OYDQL LPQCQ ... MZFID KSBFJ DKPUC TYHKB Pactor-II 100/200 ODMKV IGM NNNN		(EW)
POL	4505	3-12	1305	Thu	0437 00000	FSK 100/625	(AB)
POL	4505	3-12	1310	Thu	0437 00000	FSK 100/625	(AB)
POL	4505	10-12	1305	Thu	0437 88888 88888 33819 41449 80649 52212 ... 00037 00037	FSK 100/625	(AB)
POL	4505	10-12	1310	Thu	0437 88888 88888 33819 41449 80649 52212 ... 00037 00037	FSK 100/625	(AB)
POL	4505	17-12	1305	Thu	0437 00000	FSK 100/625	(AB)
POL	4505	17-12	1310	Thu	0437 00000	FSK 100/625	(AB)
POL	4828	9-12	1305	Wed	0547 00000	FSK 100/625	(AB)
POL	4828	9-12	1310	Wed	0547 00000	FSK 100/625	(AB)
POL	4828	16-12	1305	Wed	0457 00000	FSK 100/625	(AB)
POL	4828	16-12	1310	Wed	0457 00000	FSK 100/625	(AB)
POL	4828	21-12	1305	Mon	0547 88888 88888 81094 70303 92030 48806 23032 20194 32892 47831 81669 50562 68017 32019 ...	FSK 100/625	(AB)
POL	4828	21-12	1310	Mon	0547 88888 88888 81094 70303 92030 48806 23032 20194 32892 47831 81669 50562 68017 32019 ...	FSK 100/625	(AB)
POL	4898	7-12	1305	Mon	0547 00000	FSK 100/625	(AB)
POL	4898	7-12	1310	Mon	0547 00000	FSK 100/625	(AB)
POL	5831	2-12	0300	Wed	0231 00000	FSK 100/625	(AB)
POL	5831	2-12	0305	Wed	0231 00000	FSK 100/625	(AB)
POL	5831	3-12	0300	Thu	0231 00000	FSK 100/625	(AB)
POL	5831	3-12	0305	Thu	0231 00000	FSK 100/625	(AB)
POL	5831	9-12	0300	Wed	0231 00000	FSK 100/625	(AB)
POL	5831	9-12	0305	Wed	0231 00000	FSK 100/625	(AB)
POL	5831	16-12	0300	Wed	Polish Intel.	FSK 100/625	(AB)
POL	5831	16-12	0305	Wed	Polish Intel.	FSK 100/625	(AB)
POL	6836	3-12	0800	Thu	0434 88888 88888 86939 95930 27437 ... 49997 22538 82964 88888 88888 00042 00042	FSK 100/625	(AB)
POL	6836	3-12	0805	Thu	0434 88888 88888 86939 95930 27437 ... 49997 22538 82964 88888 88888 00042 00042	FSK 100/625	(AB)
POL	6836	7-12	0800	Mon	0434 88888 88888 86939 95930 27437 ... 49997 22538 82964 88888 88888 00042 00042	FSK 100/625	(AB)
POL	6836	7-12	0805	Mon	0434 88888 88888 86939 95930 27437 ... 49997 22538 82964 88888 88888 00042 00042	FSK 100/625	(AB)
POL	6836	10-12	0800	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	10-12	0805	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	14-12	0800	Mon	0434 88888 88888 43830 88156 14268 ... 83028 02932 32272 88888 88888 00040 00040	FSK 100/625	(AB)
POL	6836	14-12	0805	Mon	0434 88888 88888 43830 88156 14268 ... 83028 02932 32272 88888 88888 00040 00040	FSK 100/625	(AB)
POL	6836	17-12	0800	Thu	0434 88888 88888 43830 88156 14268 ... 83028 02932 32272 88888 88888 00040 00040	FSK 100/625	(AB/Danix)
POL	6836	17-12	0805	Thu	0434 88888 88888 43830 88156 14268 ... 83028 02932 32272 88888 88888 00040 00040	FSK 100/625	(AB/Danix)
POL	6836	21-12	0800	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	21-12	0805	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	24-12	0800	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	24-12	0805	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	31-12	0800	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	31-12	0805	Thu	0434 00000	FSK 100/625	(AB)
POL	7499	1-12	0900	Tue	0554 00000	FSK 100/625	(AB)



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POL	7499	1-12	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	4-12	0900	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	4-12	0905	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	8-12	0900	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	8-12	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	11-12	0900	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	11-12	0905	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	15-12	0900	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	15-12	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	18-12	0900	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	18-12	0905	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	22-12	0900	Tue	0554 88888 88888 85427 15016 46956 ... 36617 78563 87621 82538 88888 88888 00040 00040	FSK 100/625	(AB)
POL	7499	22-12	0905	Tue	0554 88888 88888 85427 15016 46956 ... 36617 78563 87621 82538 88888 88888 00040 00040	FSK 100/625	(AB)
POL	7499	29-12	0900	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	29-12	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7772	1-12	0630	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	1-12	0635	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	3-12	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	3-12	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	10-12	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	10-12	0635	Thu	0574 0000	FSK 100/625	(AB)
POL	7772	17-12	0630	Thu	0574 88888 88888 08235 04070 40840 ... 26707 79645 52209 88888 88888 00038 00038	FSK 100/625	(AB)
POL	7772	17-12	0635	Thu	0574 88888 88888 08235 04070 40840 ... 26707 79645 52209 88888 88888 00038 00038	FSK 100/625	(AB)
POL	7772	22-12	0630	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	22-12	0635	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	24-12	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	24-12	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	29-12	0630	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	29-12	0635	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	31-12	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	31-12	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7863	29-12	1150	Tue	0325 00000	FSK 100/625	(AB)
POL	7863	29-12	1155	Tue	0325 00000	FSK 100/625	(AB)
POL	7863	30-12	1150	Wed	0325 00000	FSK 100/625	(AB)
POL	7863	30-12	1150	Wed	0325 00000	FSK 100/625	(AB)
POL	9179	19-12	1610	Sat	0877 88888 88888 36361 20346 84408 ... 62096 12484 30940 88888 88888 00044 00044	FSK 100/625	(AB)
POL	9179	19-12	1615	Sat	0877 88888 88888 36361 20346 84408 ... 62096 12484 30940 88888 88888 00044 00044	FSK 100/625	(AB)
POL	9179	26-12	1610	Sat	0877 00000	FSK 100/625	(AB)
POL	9179	26-12	1615	Sat	0877 00000	FSK 100/625	(AB)
POL	9179	29-12	1610	Tue	0877 00000	FSK 100/625	(AB)
POL	9179	29-12	1615	Tue	0877 00000	FSK 100/625	(AB)
POL	9370	2-12	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	2-12	0855	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	7-12	0845	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	7-12	0850	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	9-12	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	9-12	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	14-12	0845	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	14-12	0850	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	16-12	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	16-12	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	23-12	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	23-12	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	28-12	0845	Mon	0353 88888 88888 24991 30932 27484 ... 54792 29294 01374 88888 88888 00035 00035	FSK 100/625	(AB)
POL	9370	28-12	0850	Mon	0353 88888 88888 24991 30932 27484 ... 54792 29294 01374 88888 88888 00035 00035	FSK 100/625	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
POL	9370	30-12	0845	Wed	0353 88888 88888 24991 30932 27484 ... 54792 29294 01374 88888 88888 00035	FSK 100/625	(AB)
POL	9370	30-12	0850	Wed	0353 88888 88888 24991 30932 27484 ... 54792 29294 01374 88888 88888 00035	FSK 100/625	(AB)
POL	9968	4-12	0815	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	4-12	0820	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	7-12	0815	Mon	0446 88888 88888 86558 37165 08374 ... 89059 09549 09100 88888 88888 00043	FSK 100/625	(AB)
POL	9968	7-12	0820	Mon	0446 88888 88888 86558 37165 08374 ... 89059 09549 09100 88888 88888 00043	FSK 100/625	(AB)
POL	9968	11-12	0815	Fri	0446 88888 88888 46558 37165 08374 ... 89059 09549 09100 88888 88888 00043	FSK 100/625	(AB)
POL	9968	11-12	0820	Fri	0446 88888 88888 46558 37165 08374 ... 89059 09549 09100 88888 88888 00043	FSK 100/625	(AB)
POL	9968	14-12	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	14-12	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	18-12	0815	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	18-12	0820	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	21-12	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	21-12	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	28-12	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	28-12	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	10359	1-12	0655	Tue	0684 88888 88888 28815 54112 90238 ... 69237 19419 38510 88888 88888 00043	FSK 100/625	(AB)
POL	10359	1-12	0700	Tue	0684 88888 88888 28815 54112 90238 ... 69237 19419 38510 88888 88888 00043	FSK 100/625	(AB)
POL	10359	4-12	0655	Fri	0684 88888 88888 28815 54112 90238 ... 69237 19419 38510 88888 88888 00043	FSK 100/625	(AB)
POL	10359	4-12	0700	Fri	0684 88888 88888 28815 54112 90238 ... 69237 19419 38510 88888 88888 00043	FSK 100/625	(AB)
POL	10359	8-12	0655	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	8-12	0700	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	11-12	0655	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	11-12	0700	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	15-12	0655	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	15-12	0700	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	18-12	0655	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	18-12	0700	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	22-12	0655	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	22-12	0700	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	25-12	0655	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	25-12	0700	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	29-12	0655	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	29-12	0700	Tue	0684 00000	FSK 100/625	(AB)
POL	10641	1-12	1150	Tue	0325 00000	FSK 100/625	(AB)
POL	10641	1-12	1155	Tue	0325 00000	FSK 100/625	(AB)
POL	10641	8-12	1150	Tue	0325 88888 88888 42985 52090 07945 ... 68697 75721 99199 88888 88888 00040	FSK 100/625	(AB)
POL	10641	8-12	1155	Tue	0325 88888 88888 42985 52090 07945 ... 68697 75721 99199 88888 88888 00040	FSK 100/625	(AB)
POL	10641	9-12	1150	Wed	0325 88888 88888 42985 52090 07945 ... 68697 75721 99199 88888 88888 00040	FSK 100/625	(AB)
POL	10641	9-12	1155	Wed	0325 88888 88888 42985 52090 07945 ... 68697 75721 99199 88888 88888 00040	FSK 100/625	(AB)
POL	15915	13-12	1525	Sun	0221 00000	FSK 100/625	(AB)
POL	15915	13-12	1530	Sun	0221 00000	FSK 100/625	(AB)
POL	15915	14-12	1525	Mon	0221 00000	FSK 100/625	(AB)
POL	15915	14-12	1530	Mon	0221 00000	FSK 100/625	(AB)
POL	15915	21-12	1525	Mon	0221 message	FSK 100/625	(AB)
POL	15915	21-12	1530	Mon	0221 message	FSK 100/625	(AB)
POL	16388	1-12	0730	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	1-12	0735	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	3-12	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	3-12	0735	Thu	0433 00000	FSK 100/625	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
POL	16388	8-12	0730	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	8-12	0735	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	10-12	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	10-12	0735	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	15-12	0730	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	15-12	0735	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	17-12	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	17-12	0735	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	22-12	0730	Tue	Polish Intel.	FSK 100/625	(AB)
POL	16388	22-12	0735	Tue	Polish Intel.	FSK 100/625	(AB)
POL	16388	24-12	0730	Thu	0433 88888 88888 47958 56104 25062 ... 54650 94051 83494 88888 88888 00036	FSK 100/625	(AB)
POL	16388	24-12	0735	Thu	0433 88888 88888 47958 56104 25062 ... 54650 94051 83494 88888 88888 00036	FSK 100/625	(AB)
POL	16388	31-12	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	31-12	0735	Thu	0433 00000	FSK 100/625	(AB)
POL	17531	22-12	1245	Tue	Polish Intel.	FSK 100/625	(AB)
POL	17531	22-12	1250	Tue	Polish Intel.	FSK 100/625	(AB)
Q26	8073	1-12	1131	Tue	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	2-12	0001	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	3-12	1134	Thu	Message	4+4 QPSK 75/3000 LSB	(JPL-Sib)
Q26	8073	6-12	0001	Sun	F BNGC BNGC BNGC DE VSF85 VSF85 HR MSGS GA PSE CY \$ NR1036 CK136 35 1206 0721 -- 006 324 314 012 773 017 773 018 773 023 ...	4+4 QPSK 75/3000 LSB	(JPL-Sib)
Q26	8073	7-12	0001	Mon	Message	4+4 QPSK 75/3000	(JPL-Sib)
Q26	8073	8-12	1131	Tue	Message	4+4 QPSK 75/3000 LSB	(JPL-Sib)
Q26	8073	9-12	0001	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	9-12	1130	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	10-12	1130	Thu	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	12-12	0001	Sat	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	12-12	1129	Sat	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	15-12	1130	Tue	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	16-12	0002	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	16-12	1138	Wed	Message i.p.	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	18-12	1136	Fri	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	28-12	0003	Mon	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
RADv	2021	17-12	1618	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2034	18-12	0618	Fri	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2053	17-12	1622	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2058	17-12	1625	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2300	17-12	1625	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2545	1-12	1919	Tue	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	2545	14-12	1826	Mon	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2647	18-12	0629	Fri	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2705.5	20-12	1504	Sun	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2869	18-12	0647	Fri	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3213	1-12	1801	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3296	17-12	1031	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3298	11-12	0555	Fri	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	3305	1-12	1931	Tue	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	3380	1-12	1940	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3595	7-12	0553	Mon	Tracking (Russian Voice)	USB	(F5JBR)

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RADv	3859	14-12	1819	Mon	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4059	13-12	1622	Sun	Tracking (Russian Voice)	CW	(F5JBR)
RADv	4240	10-12	0715	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4380	1-12	1525	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4755.5	18-12	1602	Fri	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4862	22-12	0745	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4993	4-12	0553	Fri	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	5104	18-12	1706	Fri	Tracking (Russian Voice)	USB	(F5JBR)
RADv	5176	4-12	0556	Fri	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	5176	20-12	1248	Sun	Tracking (Russian Voice)	USB	(F5JBR)
RADv	5264	1-12	1541	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	5401	19-12	0902	Sat	Tracking (Russian Voice)	USB	(F5JBR)
RAv	6685	2-12	1645	Wed	Korsar USB w/76779 (IL-76MD) reporting landing at Chkalovskij.	USB	(RP-MD)
RMv	3297	18-12	1711	Fri	PARAD-65 wkg outstations	USB	(F5JBR)
RMv	4751	8-12	0646	Tue	LABART-38 Comms checks with out stations	USB	(F5JBR)
RMv	4762	18-12	0728	Fri	MALIK-38 wkg outstations	USB	(F5JBR)
RNv	4042	10-12	1524	Thu	VESTNIK (RMP) comms checks with BOKOAT (RFK99)	USB	(F5JBR)
RNv	8252	6-12	0300	Sun	Russian Navy: BUKSQL comms checks with out stations	USB	(F5JBR)
S06	5073	12-12	1605	Sat	491 491 491 00000	USB	(MPJ)
S06	5073	19-12	1605	Sat	491 491 491 00000	USB	(HFD)
S06	7897	4-12	1900	Fri	342 342 342 00000	USB	(MPJ)
S06	11430	30-12	0833	Wed	746 746 746 00000	USB	(PPA)
S06	14375	3-12	0930	Thu	842 709 35 67657 62023 67693 ... 15254 46659 70227 709 35 00000	USB	(AB)
S06	14375	17-12	0930	Thu	842 956 37 91039 98640 34293 ... 85906 30875 16752 956 37 00000	USB	(AB)
S06	14375	18-12	0930	Fri	842 956 37 91039 98640 34293 ... 85906 30875 16752 956 37 00000	USB	(AB)
S06	14375	24-12	0930	Thu	842 719 38 35887 27601 04679 ... 15746 72825 46154 719 38 00000	USB	(AB)
S06	14380	17-12	0930	Thu	842 842 842 00000	USB	(HFD)
S06	17435	3-12	0830	Thu	842 709 35 67657 62023 67693 ... 15254 46659 70227 709 35 00000	USB	(AB)
S06	17435	4-12	0830	Fri	842 709 35 67657 62023 67693 ... 15254 46659 70227 709 35 00000	USB	(AB)
S06	17435	10-12	0830	Thu	842 ...	USB	(AB)
S06	17435	17-12	0830	Thu	842 956 37 91039 98640 34293 ... 85906 30875 16752 956 37 00000	USB	(AB/F5JBR/HF D)
S06	17435	24-12	0830	Thu	842 719 38 35887 27601 04679 ... 15746 72825 46154 719 38 00000	USB	(AB)
S06s	5035	1-12	1100	Tue	754	USB	(HFD)
S06s	5250	1-12	0700	Tue	374 201 5 38034 47619 33367 37555 33300 201 5 00000	USB	(AB)
S06s	5250	8-12	0700	Tue	374 201 5 38034 47619 33367 37555 33300 201 5 00000	USB	(AB)
S06s	5250	29-12	0700	Tue	374 374 374 00000	USB	(AB)
S06s	5765	3-12	0900	Thu	624 901 5 82324 36958 39423 48076 33738 901 5 00000	USB	(HFD)
S06s	5765	17-12	0900	Thu	624 910 5 39534 17228 15636 47891 32347 910 5 00000	USB	(AB)
S06s	5975	1-12	1110	Tue	754	USB	(HFD)
S06s	6315	3-12	0910	Thu	624 901 5 82324 36958 39423 48076 33738 901 5 00000	USB	(AB/HFD)
S06s	6315	10-12	0910	Thu	624 901 5 82324 36958 39423 48076 33739 901 5 00000	USB	(AB)
S06s	6315	17-12	0910	Thu	624 910 5 39534 17228 15636 47891 32347 910 5 00000	USB	(AB)
S06s	6320	8-12	0715	Tue	374 201 5 38034 47619 33367 37555 33300 201 5 00000	USB	(AB)
S06s	6845	1-12	1500	Tue	537 460 8 31900 48366 35334 32840 48436 81480 30762 33400 460 8 00000	USB	(AB)
S06s	6845	15-12	1500	Tue	587 819 6 48075 30349 31283 31472 38905 40337 819 6 00000	USB	(AB)
S06s	6845	22-12	1600	Tue	537 819 6 48075 30349 31283 31472 38905 40337 819 6 00000	USB	(AB)
S06s	6845	29-12	1500	Tue	537 537 537 00000	AM	(AB/MPJ)
S06s	7335	9-12	0830	Wed	745 201 6 44475 30322 36034 45445 44008 38053 201 6 00000	USB	(AB)
S06s	7335	23-12	0830	Wed	745 298 6 01405 15003 24357 60583 54545 92883 298 6 00000	USB	(AB)
S06s	7410	8-12	0730	Tue	427 851 6 88620 58069 61732 74537 57440 10597 851 6 00000	AM	(AB)
S06s	7410	15-12	0730	Tue	427 863 5 09394 76911 75155 92918 97067 863 5 00000	AM	(AB)
S06s	7410	29-12	0730	Tue	427 427 427 00000	USB	(AB)
S06s	8057	7-12	0830	Mon	371 846 5 71909 83981 24035 48115 34694 846 5 00000	USB	(AB)
S06s	8057	14-12	0830	Mon	371 846 5 71909 83981 24035 48115 34694 846 5 00000	USB	(AB)
S06s	8057	21-12	0830	Mon	371 854 6 09394 76911 75155 92918 97067 58604 854 6 00000	USB	(AB)
S06s	8057	28-12	0830	Mon	371 854 6 09394 76911 75155 92918 97067 58604 854 6 00000	USB	(AB)
S06s	8417	30-12	0822	Wed	471 471 471 00000	USB	(F5JBR)
S06s	8530	7-12	0840	Mon	371 846 5 71909 83981 24035 48115 34694 846 5 00000	USB	(AB)
S06s	8530	14-12	0830	Mon	371 846 5 71909 83981 24035 48115 34694 846 5 00000	USB	(AB)
S06s	8530	21-12	0840	Mon	371 854 6 09394 76911 75155 92918 97067 58604 854 6 00000	USB	(AB)
S06s	8530	28-12	0840	Mon	371 854 6 09394 76911 75155 92918 97067 58604 854 6 00000	USB	(AB)

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S06s	8812	3-12	0930	Thu	312 572 6 36330 31471 33619 37137 37908 85958 572 6 00000	USB	(AB)
S06s	8812	10-12	0930	Thu	314 572 6 36330 31471 33619 37137 37908 85958 572 6 00000	USB	(AB)
S06s	8812	17-12	0930	Thu	314 562 7 88146 57856 98835 46186 16945 80744 86200 562 7 00000	USB	(AB)
S06s	8812	24-12	0930	Thu	314 562 7 88146 57856 98835 46186 16945 80744 86200 562 7 00000	USB	(AB)
S06s	8812	31-12	0930	Thu	314 314 314 00000	USB	(AB)
S06s	9170	1-12	1510	Tue	537 460 8 31900 48366 35334 32840 48436 81480 30762 33400 460 8 00000	USB	(AB)
S06s	9170	8-12	1510	Tue	537 460 8 31900 48366 35634 32840 48436 81480 30762 33400 460 8 00000	AM	(AB)
S06s	9170	15-12	1510	Tue	587 819 6 48075 30349 31283 31472 38905 40337 819 6 00000	USB	(AB)
S06s	9170	22-12	1610	Tue	537 819 6 48075 30349 31283 31472 38905 40337 819 6 00000	USB	(AB)
S06s	9170	29-12	1510	Tue	537 537 537 00000	AM	(AB/MPJ)
S06s	9262	9-12	0830	Wed	471 809 5 31900 48366 36534 32840 48346 809 5 00000	USB	(AB)
S06s	9540	3-12	0940	Thu	312 572 6 36330 31471 33619 37137 37908 85958 572 6 00000	USB	(AB)
S06s	9540	10-12	0940	Thu	314 572 6 36330 31471 33619 37137 37908 85958 572 6 00000	USB	(AB)
S06s	9540	17-12	0940	Thu	314 562 7 88146 57856 98835 46186 16945 80744 86200 562 7 00000	USB	(AB)
S06s	9540	24-12	0940	Thu	314 562 7 88146 57856 98835 46186 16945 80744 86200 562 7 00000	USB	(AB)
S06s	9540	31-12	0939	Thu	314 314 314 00000 (1 minute early)	USB	(AB)
S06s	10920	3-12	1210	Thu	425 817 6 54027 93793 32556 30061 30603 48304 817 6 00000	USB	(AB)
S06s	10920	17-12	1210	Thu	425 871 6 40614 77249 40678 17976 21816 41997 871 6 00000	USB	(AB)
S06s	10920	24-12	1210	Thu	425 871 6 40614 77249 40678 17976 21816 41997 871 6 00000	AM	(AB)
S06s	10920	31-12	1210	Thu	425 425 425 00000 (1 minute early)	USB	(AB)
S06s	11532	8-12	0740	Tue	427 851 6 88620 58069 61732 74537 57440 10597 851 6 00000	AM	(AB)
S06s	11532	15-12	0740	Tue	427 863 5 09394 76911 75155 92918 97067 863 5 00000	AM	(AB)
S06s	11532	29-12	0740	Tue	427 427 427 00000	USB	(AB)
S06s	11780	11-12	0930	Fri	516 402 7 46062 68672 97478 39685 30485 96632 52537 402 7 00000	AM	(AB)
S06s	11780	18-12	0930	Fri	516 240 7 46062 68672 97478 39685 30485 96632 52537 249 7 00000	USB	(AB)
S06s	11830	9-12	0840	Wed	471 809 5 31900 48366 36534 32840 48346 809 5 00000	USB	(AB)
S06s	11830	30-12	0840	Wed	745 745 745 00000	USB	(AB)
S06s	11930	23-12	0840	Wed	745 298 6 01405 15003 24357 60583 54545 92883 298 6 00000	USB	(AB)
S06s	11945	1-12	0800	Tue	352 819 6 33796 13577 74526 46647 79302 53516 819 6 00000	AM	(AB)
S06s	11945	8-12	0800	Tue	352 819 6 33796 13577 74526 46647 79302 53516 819 6 00000	USB	(AB)
S06s	11945	15-12	0800	Tue	352 874 6 16070 50128 99477 24042 75956 11171 874 6 00000	USB	(AB)
S06s	11945	29-12	0800	Tue	352 352 352 00000	USB	(AB)
S06s	12155	17-12	1200	Thu	425 871 6 40614 77249 40678 17976 21816 41997 871 6 00000	USB	(AB)
S06s	12155	31-12	1200	Thu	425 425 425 00000	USB	(AB)
S06s	12365	16-12	1000	Wed	729 563 8 83086 62060 83138 39760 18969 84008 83450 42868 563 8 00000	AM	(AB)
S06s	12570	4-12	0940	Fri	516 402 7 46062 68672 97478 39685 30485 96632 52537 402 7 00000	AM	(AB)
S06s	12570	11-12	0940	Fri	516 402 7 46062 68672 97478 39685 30485 96632 52537 402 7 00000	AM	(AB)
S06s	12570	18-12	0930	Fri	516 240 7 46062 68672 97478 39685 30485 96632 52537 249 7 00000	USB	(AB)
S06s	12830	7-12	0910	Mon	872 496 5 34140 78386 91494 82963 31670 496 5 00000	USB	(AB)
S06s	12830	21-12	0910	Mon	872 501 6 95051 13808 71909 83981 24035 48115 501 6 00000	USB	(AB)
S06s	12952	3-12	0900	Thu	167 204 5 37596 83663 89353 30950 37010 204 5 00000	AM	(AB)
S06s	12952	10-12	0900	Thu	167 204 5 37596 83663 89353 30950 37014 204 5 00000	AM	(AB)
S06s	12952	17-12	0900	Thu	167 245 8 88620 58069 61732 74537 57440 10597 23521 47660 245 8 00000	USB	(AB)
S06s	12952	24-12	0900	Thu	167 245 8 88620 58069 61732 74537 57440 10597 23521 47660 245 8 00000	USB	(AB)
S06s	12952	31-12	0900	Thu	167 167 167 00000	AM	(AB)
S06s	13195	1-12	0810	Tue	352 819 6 33796 13577 74526 46647 79302 53516 819 6 00000	AM	(AB)
S06s	13195	8-12	0810	Tue	352 819 6 33796 13577 74526 46647 79302 53516 819 6 00000	USB	(AB)
S06s	13195	29-12	0810	Tue	352 352 352 00000	USB	(AB)
S06s	13470	13-12	0630	Sun	524 831 6 11171 64385 82707 06123 22536 88280 831 6 00000	USB	(AB)
S06s	13470	27-12	0630	Sun	524 879 6 20534 11160 43494 37638 16070 48834 879 6 00000	USB	(AB)
S06s	13565	3-12	0910	Thu	167 204 5 37596 83663 89353 30950 37010 204 5 00000	AM	(AB)
S06s	13565	10-12	0910	Thu	167 204 5 37596 83663 89353 30950 37014 204 5 00000	AM	(AB)
S06s	13565	17-12	0910	Thu	167 245 8 88620 58069 61732 74537 57440 10597 23521 47660 245 8 00000	USB	(AB)
S06s	13565	24-12	0910	Thu	167 245 8 88620 58069 61732 74537 57440 10597 23521 47660 245 8 00000	USB	(AB)
S06s	14280	9-12	1010	Wed	729 531 6 30702 88959 89831 42097 88475 34075 531 6 00000	AM	(AB)
S06s	14280	16-12	1010	Wed	729 563 8 83086 62060 83138 39760 18969 84008 83450 42868 563 8 00000	AM	(AB)
S06s	14280	30-12	1009	Wed	729 729 729 00000 (1 minute early)	AM	(AB)
S06s	14675	7-12	0900	Mon	872 496 5 34140 78386 91494 82963 31670 496 5 00000	USB	(AB)
S06s	14675	14-12	0900	Mon	872 496 5 34140 78386 91494 82963 31660 496 5 00000	USB	(F5JBR)
S06s	14675	21-12	0900	Mon	872 501 6 95051 13808 71909 83981 24035 48115 501 6 00000	USB	(AB)
S06s	14675	28-12	0900	Mon	862 501 6 95051 13808 71909 83981 24035 48115 501 6 00000	USB	(F5JBR)
S06s	16515	13-12	0640	Sun	524 831 6 11171 64385 82707 06123 22536 88280 831 6 00000	USB	(AB)

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S06s	16515	27-12	0640	Sun	524 879 6 20534 11160 43494 37638 16070 48834 879 6 00000	USB	(AB)
S11a	5815	4-12	1055	Fri	371/00	USB	(MPJ)
S11a	5815	9-12	1955	Wed	371/00	USB	(MPJ)
S11a	5815	11-12	1955	Fri	372/00	USB	(MPJ)
S11a	5815	16-12	1955	Wed	371/00	USB	(MPJ)
S11a	5815	30-12	1955	Wed	371/00	USB	(MPJ)
S11a	7504	1-12	0915	Tue	484/00	USB	(AB)
S11a	7504	8-12	0915	Tue	484/00	USB	(AB)
S11a	7504	11-12	0916	Fri	484/00	USB	(AB)
S11a	7504	15-12	0915	Tue	484/00	USB	(AB)
S11a	7504	22-12	0915	Tue	480/36 Vnimanie 85427 15016 46956 ... 78563 87621 82538 Vnimanie, rpt msg, konec	USB	(AB)
S11a	9200	1-12	1625	Tue	831/00	USB	(AB)
S11a	9200	5-12	1625	Sat	831/00	USB	(MPJ)
S11a	9200	8-12	1625	Tue	831/00	USB	(MPJ)
S11a	9200	19-12	1625	Sat	839/40 Vnimanie 36361 20346 84408 ... 62096 12484 30940 Vnimanie, rpt msg, konec	USB	(AB)
S11a	9200	26-12	1625	Sat	831/00	USB	(AB)
S11a	9200	29-12	1625	Tue	831/00	USB	(AB)
S11a	9610	1-12	1020	Tue	426/00	USB	(AB)
S11a	12530	3-12	1015	Thu	475/00	USB	(AB)
S11a	12530	10-12	1015	Thu	475/00	USB	(AB)
S11a	12530	17-12	1010	Thu	475/00	USB	(AB)
S11a	12530	31-12	1015	Thu	472/31 Vnimanie 96126 53477 07664 ... 46789 68124 41855 Vnimanie, rpt msg, konec	USB	(AB)
S28	4625	1-12	0809	Tue	MDZhB 08446 LYeGOChNICA 30165422	USB	(Priyom)
S28	4625	3-12	0956	Thu	MDZhB 72484 MYeGALOZAVI? ??293715	USB	(Priyom)
S28	4625	3-12	1436	Thu	MDZhB 21229 RYeVMANOL 61417984 Female voice on background	USB	(Priyom)
S28	4625	6-12	1251	Sun	MDZhB 63378 NYeVKUSNYJ 28153828	USB	(Priyom)
S28	4625	7-12	1022	Mon	MDZhB 61468 LYeVICHAR 58288996	USB	(Priyom)
S28	4625	7-12	1107	Mon	MDZhB 46316 NYeVZRACHNYJ 45741867	USB	(Priyom)
S28	4625	13-12	1405	Sun	MDZhB 18014 ZYeAZIN 01846202	USB	(Priyom)
S28	4625	13-12	1432	Sun	MDZhB 47700 ADOPTACIN 07539030	USB	(Priyom)
S28	4625	13-12	1543	Sun	MDZhB 42484 UDOBNYJ 64618101	USB	(Priyom)
S28	4625	22-12	1322	Tue	Phone channel is mistakenly set on top of buzzer channel	USB	(Priyom)
S28	4625	22-12	1517	Tue	Phone channel is mistakenly set on top of buzzer channel	USB	(Priyom)
S28	4625	28-12	1628	Mon	ZhUOZ 92002 AGATU 56884832	USB	(Priyom)
S28	4625	28-12	1754	Mon	ZhUOZ 73255 TVIN 90510025	USB	(Priyom)
S30	3756	1-12	1552	Tue	Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI	USB	(Priyom)
S30	3756	2-12	1452	Wed	8S1Shch 88133 ANANAIT 96932997 KOFYeKTOMIN 44533110	USB	(Priyom)
S30	3756	2-12	1601	Wed	8S1Shch Channel test: 03211334	USB	(Priyom)
S30	3756	2-12	1704	Wed	BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR	USB	(Priyom)
S30	3756	3-12	0458	Thu	M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5	USB	(Priyom)
S30	3756	3-12	1424	Thu	8S1Shch 78485 PROVIZOR 61483932	USB	(Priyom)
S30	3756	3-12	1705	Thu	V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch'	USB	(Priyom)
S30	3756	3-12	1828	Thu	N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM	USB	(Priyom)
S30	3756	4-12	1730	Fri	Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZU	USB	(Priyom)
S30	3756	5-12	1450	Sat	8S1Shch 79139 PAGLINOK 91410038	USB	(Priyom)
S30	3756	5-12	1614	Sat	TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27 V2MZ	USB	(Priyom)
S30	3756	5-12	1847	Sat	SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY	USB	(Priyom)
S30	3756	6-12	1946	Sun	HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP	USB	(Priyom)
S30	3756	7-12	0510	Mon	TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT	USB	(Priyom)
S30	3756	7-12	1907	Mon	42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh	USB	(Priyom)
S30	3756	8-12	0446	Tue	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ	USB	(Priyom)
S30	3756	8-12	0446	Tue	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ	USB	(Priyom)
S30	3756	8-12	1842	Tue	Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch	USB	(Priyom)
S30	3756	8-12	1842	Tue	Z7PM 7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch	USB	(Priyom)
S30	3756	9-12	0509	Wed	DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N 37CN MUDR	USB	(Priyom)
S30	3756	9-12	0509	Wed	DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N 37CN MUDR	USB	(Priyom)
S30	3756	9-12	0600	Wed	8S1Shch 64814 RASTAVA 48829047	USB	(Priyom)
S30	3756	9-12	1408	Wed	7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA	USB	(Priyom)
S30	3756	9-12	1408	Wed	7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA	USB	(Priyom)
S30	3756	9-12	1821	Wed	ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ	USB	(Priyom)
S30	3756	9-12	1821	Wed	ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ	USB	(Priyom)
S30	3756	10-12	0429	Thu	KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27	USB	(Priyom)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
S30	3756	10-12	0459	Thu	DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V	USB	(Priyom)
S30	3756	10-12	0459	Thu	KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z' NLCE LI27	USB	(Priyom)
S30	3756	10-12	1826	Thu	DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V	USB	(Priyom)
S30	3756	12-12	1508	Sat	6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ	USB	(Priyom)
S30	3756	13-12	1404	Sun	8S1Shch 22326 KURIYa 42978530	USB	(Priyom)
S30	3756	13-12	1426	Sun	8S1Shch 39778 RASSADKA 49921102	USB	(Priyom)
S30	3756	13-12	1544	Sun	8S1Shch 71684 NAZOJNIK 58727295	USB	(Priyom)
S30	3756	13-12	1609	Sun	8S1Shch 19665 KYuRIT 79526228	USB	(Priyom)
S30	3756	17-12	1827	Thu	TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N	USB	(Priyom)
S30	3756	18-12	0457	Fri	37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C	USB	(Priyom)
S30	3756	24-12	0422	Thu	27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS	USB	(Priyom)
S30	3756	27-12	0506	Sun	ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3	USB	(Priyom)
S30	3756	27-12	1821	Sun	ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF	USB	(Priyom)
S30	3756	28-12	1624	Mon	8S1Shch 34671 KONDYeNSACIYa 56537181	USB	(Priyom)
S30	3756	28-12	1756	Mon	8S1Shch 23121 KONYuShNYa 14670667	USB	(Priyom)
S30	3756	28-12	1812	Mon	ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T 5FSShch 8MUO	USB	(Priyom)
S30	3756	29-12	0510	Tue	TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N	USB	(Priyom)
S30	3756	29-12	1424	Tue	8S1Shch 44636 MIMOShKYeT 80211092	USB	(Priyom)
S30	3756	29-12	1430	Tue	8S1Shch 80671 MOHOHOD 64020034	USB	(Priyom)
S30	3756	30-12	0456	Wed	PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z'	USB	(Priyom)
S30	3756	30-12	1820	Wed	53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Pip is off freq	USB	(Priyom)
S30	5448	6-12	0550	Sun	JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4	USB	(Priyom)
S30	5448	6-12	1248	Sun	8S1Shch 04811 ISTOVAL 94375299	USB	(Priyom)
S30	5448	9-12	1826	Wed	8S1Shch 64814 RASTAVA 48829047	USB	(Priyom)
S30	5448	11-12	0538	Fri	ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC	USB	(Priyom)
S30	5448	11-12	0538	Fri	ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC	USB	(Priyom)
S30	5448	17-12	0533	Thu	6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ	USB	(Priyom)
S32	3828	1-12	1429	Tue	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39 FONTAN-34	USB	(Priyom)
S32	3828	1-12	1623	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	1-12	1922	Tue	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	2-12	1449	Wed	AL'FA-45 34950 GITANA 50309751	USB	(Priyom)
S32	3828	2-12	1850	Wed	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	3-12	1004	Thu	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	3-12	1429	Thu	AL'FA-45 58377 AGAMNYJ 60359496	USB	(Priyom)
S32	3828	3-12	1437	Thu	SLIVA-94 LANDYSh-74 STAZHeR-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	3-12	1824	Thu	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32 ROSA-64 DZhIGIT-46	USB	(Priyom)
S32	3828	4-12	1619	Fri	SLIVA-94 LANDYSh-74 STAZHeR-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	4-12	1836	Fri	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	5-12	1325	Sat	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	5-12	1445	Sat	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	5-12	1454	Sat	AL'FA-45 85657 NAPLYV 98280262	USB	(Priyom)
S32	3828	5-12	1939	Sat	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	6-12	1538	Sun	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	6-12	1917	Sun	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	7-12	1533	Mon	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	8-12	1538	Tue	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	8-12	1538	Tue	STOROZh-62 NYeVKA-26 KARTA-11 UTyoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	8-12	1832	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	8-12	1832	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 K	USB	(Priyom)
S32	3828	9-12	0606	Wed	AL'FA-45 93952 GASTRANA 04783790	USB	(Priyom)
S32	3828	9-12	0606	Wed	AL'FA-45 93952 GASTRANA 04783790	USB	(Priyom)
S32	3828	9-12	1105	Wed	AL'FA-45 61281 SOBRATSTVO 49700621	USB	(Priyom)
S32	3828	9-12	1413	Wed	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	9-12	1413	Wed	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
S32	3828	10-12	1656	Thu	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyOs-94 KOVBOJ-39	USB	(Priyom)
S32	3828	10-12	1656	Thu	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTyOs-94 KOVBOJ-39	USB	(Priyom)
S32	3828	10-12	1730	Thu	RUZh'E-26 BIZON-64 PyeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	10-12	1730	Thu	RUZh'E-26 BIZON-64 PyeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	13-12	1404	Sun	AL'FA-45 28797 VYeRNIN 86685481	USB	(Priyom)
S32	3828	13-12	1409	Sun	AL'FA-45 18179 TOKMACH 23522556	USB	(Priyom)
S32	3828	13-12	1430	Sun	AL'FA-45 09856 BRICAPUN 75785788	USB	(Priyom)
S32	3828	13-12	1548	Sun	AL'FA-45 54992 NALIVChATYJ 07876547	USB	(Priyom)
S32	3828	14-12	1612	Mon	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	15-12	1424	Tue	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	15-12	1708	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	17-12	1538	Thu	RUZh'E-26 BIZON-64 PyeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	17-12	1655	Thu	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	17-12	1924	Thu	KOVBOJ-39	USB	(Priyom)
S32	3828	24-12	1600	Thu	AL'FA-45 35341 PUSTOTA 69254008	USB	(Priyom)
S32	3828	24-12	1612	Thu	STOROZh-62 NYeVKA-26 KARTA-11 UTyOs-94 KOVBOJ-39	USB	(Priyom)
S32	3828	24-12	1726	Thu	AL'FA-45 48608 UGRYuMYJ 88415148	USB	(Priyom)
S32	3828	24-12	1742	Thu	AL'FA-45 01600 KARTA 54347381	USB	(Priyom)
S32	3828	24-12	1757	Thu	AL'FA-45 27199 FORTUNA 00377897	USB	(Priyom)
S32	3828	24-12	1826	Thu	AL'FA-45 63029 MONITOR 45520826	USB	(Priyom)
S32	3828	24-12	1912	Thu	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	24-12	1957	Thu	AL'FA-45 48115 UNNA 30656642	USB	(Priyom)
S32	3828	25-12	1500	Fri	AL'FA-45 32856 ZAMYKANIYe 73646064	USB	(Priyom)
S32	3828	25-12	1839	Fri	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	28-12	1628	Mon	AL'FA-45 06292 NOZhOBER 94614767	USB	(Priyom)
S32	3828	28-12	1644	Mon	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	28-12	1800	Mon	AL'FA-45 42173 LYePOSKIT 74408758	USB	(Priyom)
S32	3828	28-12	1825	Mon	STOROZh-62 NYeVKA-26 KARTA-11 UTyOs-94 KOVBOJ-39	USB	(Priyom)
S32	3828	29-12	1431	Tue	AL'FA-45 26929 DZhUTOKRYaZh 52029705	USB	(Priyom)
S32	3828	29-12	1439	Tue	AL'FA-45 54698 BYeSTYeNYeVOJ 23679189	USB	(Priyom)
S32	3828	29-12	1606	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KURGAN-40 DUBLYoR-68 SLIVA-94 LANDYSh-74 STAZhER-29 A	USB	(Priyom)
S32	3828	30-12	1414	Wed	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	30-12	1603	Wed	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	7009	1-12	0807	Tue	AL'FA-45 Failed signal sending attempt	USB	(Priyom)
S32	7009	1-12	1326	Tue	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	7009	2-12	1215	Wed	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	7009	3-12	0950	Thu	AL'FA-45 74530 VAZhDA 25133885	USB	(Priyom)
S32	7009	9-12	1105	Wed	AL'FA-45 61281 SOBRATSTVO 49700621	USB	(Priyom)
S3850	3850	1-12	0423	Tue	BARON-78 Network test and count	USB	(Priyom)
S3850	3850	2-12	0403	Wed	BARON-78 TROS-28	USB	(Priyom)
S3850	3850	2-12	0406	Wed	BARON-78 VYeKTOR-70	USB	(Priyom)
S3850	3850	4-12	0417	Fri	BARON-78 TROS-28	USB	(Priyom)
S3850	3850	5-12	1501	Sat	BARON-78 78331 KAGLYuSAL 85341796 Sent for Tros-28	USB	(Priyom)
S3850	3850	6-12	0455	Sun	BARON-78 TROS-28	USB	(Priyom)
S3850	3850	8-12	1446	Tue	BARON-78 Test counts	USB	(Priyom)
S3850	3850	9-12	1415	Wed	BARON-78 KOVBOJ-35 SEKRET-80 KADMIJ-72	USB	(Priyom)
S3850	3850	9-12	1415	Wed	BARON-78 KOVBOJ-35 SEKRET-80 KADMIJ-72	USB	(Priyom)
S3850	3850	9-12	1801	Wed	BARON-78 Time signal for Tros-28	USB	(Priyom)
S3850	3850	9-12	1801	Wed	BARON-78 Time signal for TROS-28	USB	(Priyom)
S3850	3850	10-12	0402	Thu	BARON-78 Time signal and network test	USB	(Priyom)
S3850	3850	10-12	0402	Thu	BARON-78 Time signal and network test.	USB	(Priyom)
S3850	3850	13-12	1436	Sun	BARON-78 15198 VINOPROVOD 81711585 Sent for Tros-28 in urgency cathegory "Vozduh". Confirmation requ	USB	(Priyom)
S3850	3850	13-12	1554	Sun	BARON-78 20711 PALAMIDA 20920515 Sent for Tros-28 in urgency cathegory "Vozduh". Confirmation reques	USB	(Priyom)
S3850	3850	16-12	0357	Wed	BARON-78 TROS-28 Network test and count	USB	(Priyom)
S3850	3850	17-12	0642	Thu	BRITVA-36 VATAGA-12 Network test and count	USB	(Priyom)
S3850	3850	17-12	1412	Thu	BARON-78 TROS-28	USB	(Priyom)



Code	Freq	Date	UTC	Day	Details	Mode	Ctrlb
S3850	4940	9-12	1504	Wed	VYeKTOR-42 ALEUT-11 TULA-86 POLYuS-55 KURTKA-27 KRUG-31	USB	(Priyom)
S3850	4940	9-12	1900	Wed	VYeKTOR-42 ALEUT-11 TULA-86 POLYuS-55 KURTKA-27 KRUG-31	USB	(Priyom)
S3850	4940	10-12	0622	Thu	VYeKTOR-42 ALEUT-11 TULA-86 KRUG-31 POLYuS-55 KURTKA-27	USB	(Priyom)
S3850	4940	10-12	0622	Thu	VYeKTOR-42 ALEUT-11 TULA-86 KRUG-31 POLYuS-55 KURTKA-27	USB	(Priyom)
S3850	4940	17-12	0607	Thu	VYeKTOR-42 POLYuS-55	USB	(Priyom)
S4525	4524	8-12	2109	Tue	Channel marker (dash)	USB	(AB)
S4525	4524	20-12	1912	Sun	Channel marker (dash)	USB	(AB)
S5292	5292	1-12	0737	Tue	TRYeL'-31 18409 UDVOITYeL' 53278652	USB	(Priyom)
S5292	5292	7-12	0807	Mon	RYeGATA-75 37941 IZBORSK 36441192 count before the signal	USB	(Priyom)
S5292	5292	7-12	1237	Mon	SYeKRYeT-39 34676 TABLYeTKA 37298563	USB	(Priyom)
S5292	5292	9-12	1214	Wed	BOYeC-43 37653 PLAVUCHIJ 18469647	USB	(Priyom)
S5292	5292	9-12	1214	Wed	BOYeC-43 37653 PLAVUCHIJ 18469647	USB	(Priyom)
S5292	5292	15-12	0738	Tue	TRYeL'-31 48564 INTYeNDANT 45650101 count before the signal	USB	(Priyom)
S5292	5292	15-12	1343	Tue	VIZIR-21 27474 KUVALDA 53570866	USB	(Priyom)
S5292	5292	15-12	1343	Tue	VIZIR-21 27474 KUVALDA 53570866	USB	(Priyom)
S5292	5292	30-12	0717	Wed	Female operator followed by channel marker D	USB	(PPA)
S5292	5292	30-12	0755	Wed	TRYeL'-31 VIZIR-21 26649 OKRUZhNOJ 12856479	USB	(Priyom)
S5292	5292	30-12	1407	Wed	TRYeL'-31 VIZIR-21 37465 SLOVAR' 42295886 count before the signal	USB	(Priyom)
SDN	20204.2	15-12	1524	Tue	Sudanese Diplo, Khartoum & Sanaa	Pactor-1	(MCO)
UM02	10470	28-12	0130	Mon	VVV CQ (x11) DE YRM YRM QSV K. HOI DE ROZ GEI ROZ ZNN VA	CW	(JPL-Sib)
UM02	10470	30-12	0129	Wed	VVV CQ CQ CQ CQ DE YRM YRM etc.	CW	(JPL-HK)
UM10	3329	24-12	2050	Thu	10-mins net: WORZ	CW	(JPL-Sib)
UM10	3329	25-12	1658	Fri	10-mins net: WORZ	CW	(JPL-Sib)
UM10	3363	2-12	2111	Wed	10-minutes net: 6G5Y	CW	(JPL-Sib)
UM10	3363	6-12	1837	Sun	10-minutes station: 6G5Y	CW	(JPL-Sib)
UM10	3363	8-12	2336	Tue	10-minutes net: 6G5Y	CW	(JPL-Sib)
UM10	6773	2-12	0037	Wed	10-minutes net: JZUN (new callsign and freq)	CW	(JPL-Sib)
UM10	6793	3-12	0050	Thu	10-minutes net: PROD (new callsign)	CW	(JPL-Sib)
UM10	6793	11-12	0026	Fri	10-minutes net: PROD	CW	(JPL-HK)
V02a	7554	17-12	1956	Thu	Atenci% n 26102 30421 43752. Messages: 20565 78822 28057 ... and 50644 56188 57211 ... and 16071 82721 06040 ... Final Final Final	LSB	(qsr711/Danix /DSch
V07	12137	6-12	0140	Sun	661 661 661 1 x3 492 73 x2 54305 18875 .....71220 000 000	USB	(Dan)
V07	12137	20-12	0100	Sun	661 661 661 1 ...	USB	(Dan)
V07	14637	6-12	0120	Sun	661 661 661 1 x3 492 73 x2 54305 18875 .....71220 000 000	USB	(Dan)
V07	14637	13-12	0120	Sun	661 661 661 000	USB	(Dan)
V07	14637	20-12	0100	Sun	661 661 661 1 ...	USB	(Dan)
V07	14637	27-12	0120	Sun	661 661 661 000	USB	(Dan)
V07	16037	6-12	0100	Sun	661 661 661 1 x3 492 73 x2 54305 18875 .....71220 000 000	USB	(Dan)
V07	16037	13-12	0100	Sun	661 661 661 000	USB	(Dan)
V07	16037	20-12	0100	Sun	661 661 661 1 ...	USB	(Dan)
V07	16037	27-12	0100	Sun	661 661 661 000	USB	(Dan)
V26	7155	9-12	0946	Wed	i.p. female operator //9153 kHz	LSB	(JPL-HK)
V26	7553	10-12	1015	Thu	Female operator	USB	(JPL-HK)
V26	8073	2-12	0001	Wed	Voice callup. Male operator	USB	(JPL-HK)
V26	8073	3-12	1129	Thu	XSV85 voice callup. Male operator	USB	(JPL-Sib)
V26	8073	6-12	0001	Sun	callup: DingHai de 259 We have (a message) for you. Please copy. Then: DingHai de 259, the message is coming up, copy (into 4+4 traffic)	USB	(JPL-Sib)
V26	8073	7-12	0032	Mon	Male operator. Voice message, repeat of the messages sent by M95 and Q26	USB	(JPL-Sib)
V26	8073	8-12	1130	Tue	Voice callup. Male operator	USB	(JPL-HK)
V26	8073	9-12	0001	Wed	Callup. Male operator	USB	(JPL-HK)
V26	8073	9-12	1130	Wed	Callup. Female operator.	USB	(JPL-HK)
V26	8073	10-12	0022	Thu	Male operator	USB	(JPL-HK)
V26	8073	10-12	1130	Thu	Callup. Male operator	USB	(JPL-HK)
V26	8073	12-12	0001	Sat	Callup. Male operator	USB	(JPL-HK)
V26	8073	12-12	1128	Sat	Callup. Male operator	USB	(JPL-HK)
V26	8073	15-12	1129	Tue	Callup. Male operator	USB	(JPL-HK)
V26	8073	16-12	0001	Wed	Callup. Male operator	USB	(JPL-HK)
V26	8073	16-12	0039	Wed	Female operator sending the same message as M95	USB	(JPL-HK)
V26	8073	28-12	0002	Mon	Callup. Male operator	USB	(JPL-HK)
V26	8073	28-12	0038	Mon	Male operator, repeating the Q26 and M95 messages	USB	(JPL-HK)
V26	8073	31-12	0021	Thu	Repeat of M95's message. Male Operator	USB	(JPL-HK)
V26	9153	9-12	0946	Wed	i.p. female operator //7555 kHz	LSB	(JPL-HK)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
V28	3039	12-12	1330	Sat	Female operator	AM	(Token-J)
V28	3039.86	22-12	1332	Tue	variable groups kk/yl ends 1341z	AM	(Token-J)
V28	3047	14-12	1336	Mon	message	AM	(BCL)
V28	3047.1	14-12	1336	Mon	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3047.11	28-12	1331	Mon	variable groups kk/yl ends 1338z	AM	(Token-J)
V28	3048.47	21-12	1338	Mon	variable groups kk/yl ends 1348z	AM	(Token-J)
V28	3048.71	20-12	1333	Sun	variable groups kk/yl ends 1338z	AM	(Token-J)
V28	3048.75	17-12	1332	Thu	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3049	10-12	1330	Thu	message	AM	(BCL)
V28	3049.53	30-12	1332	Wed	variable groups kk/yl ends 1338z	AM	(Token-J)
V28	3051.55	23-12	1331	Wed	variable groups kk/yl ends 1336z	AM	(Token-J)
V28	3051.76	19-12	1333	Sat	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3052	8-12	1329	Tue	gong-doo-san	AM	(BCL)
V28	3054.6	11-12	1330	Fri	Female operator	AM	(Token-J)
V28	3054.6	13-12	1335	Sun	Female operator	AM	(Token-J)
V28	3054.65	16-12	1332	Wed	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3063.45	31-12	1339	Thu	variable groups kk/yl ends 1342z, started on 3032 kHz, then to 3044 and 3062.45 kHz	AM	(Token-J)
V28	3063.75	15-12	1335	Tue	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3116.88	16-12	1339	Wed	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3128.52	17-12	1330	Thu	variable groups kk/yl ends 1336z	AM	(Token-J)
V28	3140.97	27-12	1332	Sun	variable groups kk/OM ends 1340z	AM	(Token-J)
V28	3141.65	30-12	1330	Wed	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3142.24	29-12	1335	Tue	variable groups kk/OM ends 1342z	AM	(Token-J)
V28	3145.73	31-12	1330	Thu	variable groups kk/OM ends 1341z	AM	(Token-J)
V28	3146.26	28-12	1330	Mon	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3149.99	25-12	1337	Fri	variable groups kk/OM ends 1338z	AM	(Token-J)
V28	3156	14-12	1337	Mon	After closing, brief talk between a male and a female with North Korean accent was heard	AM	(BCL)
V28	3156	16-12	1332	Wed	"KIM IL SUNG, KIM JUNG IL, cold wind from Baekdu" and at 1335 UTC a scream of a woman was heard	AM	(BCL)
V28	3156.39	19-12	1340	Sat	variable groups kk/yl ends 1345z	AM	(Token-J)
V28	3156.46	24-12	1331	Thu	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3156.54	21-12	1330	Mon	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3156.8	15-12	1332	Tue	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3159.4	29-12	1332	Tue	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.83	30-12	1330	Wed	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.83	31-12	1330	Thu	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.85	18-12	1329	Fri	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.85	27-12	1335	Sun	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.86	19-12	1330	Sat	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.87	14-12	1330	Mon	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3276.87	15-12	1330	Tue	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3276.87	16-12	1330	Wed	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.88	28-12	1330	Mon	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.92	22-12	1331	Tue	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3276.92	24-12	1330	Thu	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3276.92	25-12	1330	Fri	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3276.95	21-12	1330	Mon	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3276.96	17-12	1338	Thu	variable groups kk/yl ends 1341z	AM	(Token-J)
V28	3276.96	20-12	1340	Sun	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3276.96	23-12	1330	Wed	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3277	29-11	1330	Tue	Female operator	AM	(Token-J)
V28	3277	1-12	1330	Tue	Female operator	AM	(Token-J)
V28	3277	3-12	1330	Thu	message	AM	(BCL)
V28	3277	3-12	1330	Thu	1 2 3 1 2 3 rakdusan rakdusan rakdusan, 1 2 3 1 2 3 rakdusan rakdusan rakdusan	AM	(BCL)
V28	3277	5-12	1330	Sat	Female operator	AM	(Token-J)
V28	3277	6-12	1330	Sun	Female operator	AM	(Token-J)
V28	3277	7-12	1330	Mon	Female operator	AM	(Token-J)
V28	3277	8-12	1330	Tue	After closing, some Korean words were heard. Translation: "you sucker, stand up, bow"	AM	(BCL)
V28	3277	9-12	1330	Wed	ends at 1340 UTC. Switched to 3689 kHz after completion of the transmission 3277 kHz	AM	(Token-J/BCL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
V28	3277	9-12	1340	Wed	Switched from 3277 kHz. Brief message	AM	(Token-J)
V28	3277	10-12	1330	Thu	Female operator	AM	(Token-J/BCL)
V28	3277	11-12	1330	Fri	Female operator	AM	(Token-J)
V28	3277	12-12	1330	Sat	Female operator	AM	(Token-J)
V28	3277	13-12	1330	Sun	Female operator	AM	(Token-J)
V28	3682.2	21-12	1331	Mon	variable groups kk/yl ends 1341z	AM	(Token-J)
V28	3687	11-12	1330	Fri	Female operator	AM	(Token-J)
V28	3688.33	25-12	1331	Fri	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3688.57	28-12	1330	Mon	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3689	8-12	1328	Tue	rak-doo-san	AM	(BCL)
V28	3689	9-12	1330	Wed	voice traffic, not the normal V28 format.	AM	(Token-J/BCL)
V28	3689.0	15-12	1330	Tue	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3689.2	23-12	1329	Wed	variable groups kk/yl ends 1336z	AM	(Token-J)
V28	3689.33	19-12	1330	Sat	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3689.34	20-12	1331	Sun	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3689.8	16-12	1330	Wed	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3690.1	31-12	1331	Thu	variable groups kk/yl ends 1342z	AM	(Token-J)
V28	3690.2	22-12	1331	Tue	variable groups kk/yl ends 1341z	AM	(Token-J)
V28	3690.38	24-12	1329	Thu	variable groups kk/yl ends 1339z	AM	(Token-J)
V28	3691	12-12	1330	Sat	Female operator	AM	(Token-J)
V28	3691.01	18-12	1330	Fri	variable groups kk/yl ends 1340z	AM	(Token-J)
V28	3691.08	17-12	1329	Thu	variable groups kk/yl ends 1337z	AM	(Token-J)
V28	3692	10-12	1332	Thu	Female operator	AM	(Token-J)
V28	3692	13-12	1330	Sun	Female operator	AM	(Token-J)
V28	3693.83	14-12	1330	Mon	variable groups kk/yl ends 1339 started on 3698.85 before changing frequency	AM	(Token-J)
V28	3695.8	29-12	1331	Tue	variable groups kk/yl ends 1338z	AM	(Token-J)
X06	8180	18-12	1334	Fri	Mazielka. Sequence: 241563	MFSK	(AAI)
X06	9041	3-12	1219	Thu	Mazielka. Sequence: 645321	MFSK	(Danix)
X06	9174	10-12	1321	Thu	Mazielka. Sequence: 231654	MFSK	(AAI)
X06	9354	3-12	1220	Thu	Mazielka. Sequence: 645321	MFSK	(Danix)
X06	10214	24-12	1510	Thu	Mazielka. Sequence: 263145	MFSK	(Danix)
X06	11467	10-12	1501	Thu	Mazielka. Sequence: 231654	MFSK	(Danix)
X06	12055	11-12	0903	Fri	Mazielka	MFSK	(AAI)
X06	12126	24-12	0754	Thu	Mazielka. Sequence: 521634	MFSK	(AAI)
X06	12150	2-12	1500	Wed	Mazielka. Sequence: 256341	MFSK	(Danix)
X06	12208	2-12	1512	Wed	Mazielka. Sequence: 256341	MFSK	(F5JBR)
X06	12215	4-12	1007	Fri	Mazielka. Sequence: 361245	MFSK	(Sch)
X06	12224	14-12	1006	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	12224	14-12	1007	Mon	Mazielka. Sequence: 43125	MFSK	(Sch)
X06	13423	28-12	1107	Mon	Mazielka. Sequence: 412635	MFSK	(Danix)
X06	13452	7-12	0805	Mon	Mazielka. Sequence: 165324	MFSK	(Danix)
X06	13517	14-12	1043	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	13517	28-12	0935	Mon	Mazielka. Sequence: 463125	MFSK	(Danix)
X06	13524	1-12	0752	Tue	Mazielka. Sequence: 125643	MFSK	(AAI)
X06	13524	14-12	0751	Mon	Mazielka. Sequence: 125643	MFSK	(Sch)
X06	13940	3-12	1257	Thu	Mazielka. Sequence: 645321	MFSK	(AAI)
X06	14405	2-12	0922	Wed	Mazielka. Sequence: 256341	MFSK	(AAI)
X06	14650	12-12	0939	Sat	Mazielka. Sequence: 215346	MFSK	(Danix)
X06	14825	7-12	0750	Mon	Mazielka. Sequence: 641523	MFSK	(PUK)
X06	14870	14-12	0810	Mon	Mazielka. Sequence: 156234	MFSK	(F5JBR)
X06	15160	11-12	0900	Fri	Mazielka	MFSK	(AAI)
X06	15676	10-12	1252	Thu	Mazielka. Sequence: 231654	MFSK	(AAI)
X06	15676	14-12	1226	Mon	Mazielka. Sequence: 231654	MFSK	(Sch)
X06	16115	2-12	1107	Wed	Mazielka. Sequence: 215346	MFSK	(F5JBR)
X06	16115	12-12	1026	Sat	Mazielka. Sequence: 215346	MFSK	(F5HBR)
X06	16118	14-12	1033	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	16153	24-12	0815	Thu	Mazielka. Sequence: 153624	MFSK	(AAI)
X06	16188	1-12	1341	Tue	Mazielka. Sequence: 325614	MFSK	(AAI/Danix)
X06	16324	10-12	0844	Thu	Mazielka. Sequence: 521634	MFSK	(AAI)
X06	17511	7-12	0757	Mon	Mazielka. Sequence: 641523	MFSK	(PUK)
X06	18177	23-12	0800	Wed	Mazielka. Sequence: 164253	MFSK	(Danix)
X06	18197	4-12	1023	Fri	Mazielka. Sequence: 645321	MFSK	(Sch)

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X06	19511	3-12	0716	Thu	Mazielka. Sequence: 314265	MFSK	(PUK)
X06	20837	4-12	1020	Fri	Mazielka. Sequence: 645321	MFSK	(Sch)
X06b	13884	11-12	1409	Fri	Mazielka. Sequence 1--6--	MFSK	(AB)
X06b	14538	20-12	1450	Sun	Mazielka. Sequence: 1--6--	MFSK	(AB)
X06b	14538	28-12	1237	Mon	Mazielka. Sequence: 1--6--	MFSK	(Sch)
X06b	14538	28-12	1250	Mon	Mazielka. Sequence: 1--6--	MFSK	(Sch)
X06b	14761	2-12	0724	Wed	Mazielka. Sequence: 1--6--	MFSK	(Danix)
X06b	16320	2-12	1219	Wed	Mazielka. Sequence: 1--6--	MFSK	(Danix)
X06b	16320	2-12	1500	Wed	Mazielka. Sequence: 111222	MFSK	(Danix)
X06c	15084	11-12	0746	Fri	Mazielka. Sequence: 123456	MFSK	(Sch)
XPA	5864	1-12	1940	Tue	138 1 06397 00235 31686 ... 17017 30080 10422	MFSK-20/10Bd	(AB/HFD)
XPA	5864	10-12	1940	Thu	138 138 138 000 05044 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	5864	15-12	1940	Tue	138 138 138 000 null message	MFSK-20/10Bd	(AB)
XPA	7364	1-12	1920	Tue	138 1 06397 00235 31686 ... 17017 30080 10422	MFSK-20/10Bd	(AB/HFD)
XPA	7364	10-12	1920	Thu	138 138 138 000 05044 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	7364	15-12	1920	Tue	138 138 138 000 null message	MFSK-20/10Bd	(AB)
XPA	7756	2-12	0700	Wed	706 706 706 03270 00001 00000 10140	MFSK-20/19Bd	(AB/HFD)
XPA	7756	5-12	0700	Sat	706 706 706 000 07398 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	7756	9-12	0700	Wed	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	7756	12-12	0700	Sat	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	7756	16-12	0700	Wed	706 706 706 000 06891 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	7756	19-12	0700	Sat	706 706 706 000 06679 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	7756	26-12	0700	Sat	706 1 01293 00206 52595 ... 77070 76107 10452	MFSK-20/19Bd	(AB)
XPA	7756	30-12	0700	Wed	706 706 706 000 02942 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	8146	1-12	1900	Tue	138 1 06397 00235 31686 ... 17017 30080 10422	MFSK-20/10Bd	(AB/HFD)
XPA	8164	10-12	1900	Thu	138 138 138 000 05044 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	8164	15-12	1900	Tue	138 138 138 000 null message	MFSK-20/10Bd	(AB)
XPA	9056	2-12	0720	Wed	706 706 706 03270 00001 00000 10140	MFSK-20/19Bd	(AB/HFD)
XPA	9056	5-12	0720	Sat	706 706 706 000 07398 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	9056	9-12	0720	Wed	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	9056	12-12	0720	Sat	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	9056	16-12	0720	Wed	706 706 706 000 06891 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	9056	19-12	0720	Sat	706 706 706 000 06679 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	9056	26-12	0720	Sat	706 1 01293 00206 52595 ... 77070 76107 10452	MFSK-20/19Bd	(AB)
XPA	9056	30-12	0720	Wed	706 706 706 000 02942 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	10656	2-12	0740	Wed	706 706 706 03270 00001 00000 10140	MFSK-20/19Bd	(AB/HFD)
XPA	10656	5-12	0740	Sat	706 706 706 000 07398 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	10656	9-12	0740	Wed	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	10656	12-12	0740	Sat	706 1 02626 00161 45705 ... 13440 32986 04030	MFSK-20/19Bd	(AB)
XPA	10656	16-12	0740	Wed	706 706 706 000 06891 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	10656	19-12	0740	Sat	706 706 706 000 06679 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA	10656	26-12	0740	Sat	706 1 01293 00206 52595 ... 77070 76107 10452	MFSK-20/19Bd	(AB)
XPA	10656	30-12	0740	Wed	706 706 706 000 02942 00001 00000 10140	MFSK-20/19Bd	(AB)
XPA2	12138	1-12	1340	Tue	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB/HFD)
XPA2	12138	6-12	1340	Sun	09177 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	12138	8-12	1340	Tue	01619 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	12138	13-12	1340	Sun	00147 00097 71416 21683 11211 ... 46704 33632 34136 67580 51026	MFSK-16/20Bd	(MPJ)
XPA2	12138	15-12	1340	Tue	00147 00097 71416 ... 33136 66580 51026	MFSK-16/20Bd	(AB/MPJ)
XPA2	12138	20-12	1340	Sun	04183 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	12138	22-12	1340	Tue	08393 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	12138	29-12	1340	Tue	03486 00067 37415 ... 05873 75272 23137	MFSK-16/20Bd	(AB/MPJ)
XPA2	12217	4-12	1440	Fri	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/HFD)
XPA2	12217	5-12	1440	Sat	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/MPJ)
XPA2	12217	11-12	1440	Fri	02587 00077 33114 ... 06184 54582 52111	MFSK-16/20Bd	(AB/MPJ)
XPA2	12217	18-12	1440	Fri	02575 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	12217	19-12	1440	Sat	07659 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	12217	25-12	1440	Fri	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	12217	26-12	1440	Sat	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	13393	4-12	0700	Fri	00396 00079 88881 ... 26374 04168 10205	MFSK-16/20Bd	(AB)
XPA2	13393	8-12	0700	Tue	05634 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13393	11-12	0700	Fri	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13393	15-12	0700	Tue	07524 00001 00000 10140	MFSK-16/20Bd	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
XPA2	13393	18-12	0700	Fri	06042 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13393	22-12	0700	Tue	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	13393	25-12	0700	Fri	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	13393	29-12	0700	Tue	02087 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13528	1-12	1320	Tue	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB/HFD)
XPA2	13538	6-12	1320	Sun	09177 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	13538	8-12	1320	Tue	01619 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13538	15-12	1320	Tue	00147 00097 71416 ... 33136 66580 51026	MFSK-16/20Bd	(AB)
XPA2	13538	20-12	1320	Sun	04183 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13538	22-12	1320	Tue	08393 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13538	29-12	1320	Tue	03486 00067 37415 ... 05873 75272 23137	MFSK-16/20Bd	(AB)
XPA2	13561	2-12	0840	Wed	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	13561	7-12	0840	Mon	04207 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13561	9-12	0840	Wed	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13561	14-12	0840	Mon	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	13561	16-12	0840	Wed	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	13561	21-12	0840	Mon	08141 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13561	23-12	0840	Wed	09306 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13561	28-12	0840	Mon	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB)
XPA2	13561	30-12	0840	Wed	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB/PPA)
XPA2	13884	4-12	1420	Fri	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/HFD)
XPA2	13884	5-12	1420	Sat	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/MPJ)
XPA2	13884	11-12	1420	Fri	02587 00077 33114 ... 06184 54582 52111	MFSK-16/20Bd	(AB/MPJ)
XPA2	13884	18-12	1420	Fri	02575 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13884	19-12	1420	Sat	07659 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	13884	25-12	1420	Fri	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	13884	26-12	1420	Sat	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	14493	4-12	0720	Fri	00396 00079 88881 ... 26374 04168 10205	MFSK-16/20Bd	(AB)
XPA2	14493	8-12	0720	Tue	05634 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14493	11-12	0720	Fri	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14493	15-12	0720	Tue	07524 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14493	18-12	0720	Fri	06042 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14493	22-12	0720	Tue	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	14493	25-12	0720	Fri	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	14493	29-12	0720	Tue	02087 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14538	1-12	1300	Tue	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB/HFD)
XPA2	14538	6-12	1300	Sun	09177 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	14538	8-12	1300	Tue	Stops after 1,5 mins start tones. Carrier briefly up at 1303z.	MFSK-16/20Bd	(AB)
XPA2	14538	15-12	1300	Tue	00147 00097 71416 ... 33136 66580 51026	MFSK-16/20Bd	(AB)
XPA2	14538	20-12	1300	Sun	04183 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14538	22-12	1300	Tue	08393 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14538	29-12	1300	Tue	03486 00067 37415 ... 05873 75272 23137	MFSK-16/20Bd	(AB/MPJ)
XPA2	14761	2-12	0820	Wed	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	14761	7-12	0820	Mon	04207 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14761	9-12	0820	Wed	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14761	14-12	0820	Mon	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	14761	16-12	0820	Wed	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	14761	21-12	0820	Mon	08141 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14761	23-12	0820	Wed	09306 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14761	28-12	0820	Mon	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB)
XPA2	14761	30-12	0820	Wed	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB/PPA)
XPA2	15861	2-12	0800	Wed	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	15861	7-12	0800	Mon	04207 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15861	9-12	0800	Wed	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15861	14-12	0800	Mon	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	15861	16-12	0800	Wed	06471 00107 57392 ... 07776 92669 50016	MFSK-16/20Bd	(AB)
XPA2	15861	21-12	0800	Mon	08141 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15861	23-12	0800	Wed	09306 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15861	28-12	0800	Mon	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB)
XPA2	15861	30-12	0800	Wed	07532 00123 79574 ... 52585 49006 25467	MFSK-16/20Bd	(AB)
XPA2	15967	4-12	1400	Fri	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/HFD)
XPA2	15967	5-12	1400	Sat	07894 00089 80713 ... 55907 81777 46240	MFSK-16/20Bd	(AB/MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
XPA2	15967	11-12	1400	Fri	02587 00077 33114 ... 06184 54582 52111	MFSK-16/20Bd	(AB)
XPA2	15967	18-12	1400	Fri	02575 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15967	19-12	1400	Sat	07659 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	15967	25-12	1400	Fri	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	15967	26-12	1400	Sat	07719 00121 67628 ... 97065 80671 11065	MFSK-16/20Bd	(AB)
XPA2	16293	4-12	0740	Fri	00396 00079 88881 ... 26374 04168 10205	MFSK-16/20Bd	(AB)
XPA2	16293	8-12	0740	Tue	05634 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16293	11-12	0740	Fri	03230 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16293	15-12	0740	Tue	07524 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16293	18-12	0740	Fri	06042 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16293	22-12	0740	Tue	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	16293	25-12	0740	Fri	09250 00119 43492 ... 78753 26785 24046	MFSK-16/20Bd	(AB)
XPA2	16293	29-12	0740	Tue	02087 00001 00000 10140	MFSK-16/20Bd	(AB)

## CONTRIBUTORS

AAI	Antonio Anselmi, Italy	JPL-HK	JPL via remote rx Hong Kong
AB	Ary Boender, Netherlands	JPL-Sib	JPL via remote rx Siberia
AB-ISR	Ary Boender via remote rx in Israel	K5KNT	K5KNT, Kent, USA
AnEur	Anonymous Europe	KK2	Kristian K, Central Europe
BCL	bclman, S. Korea	Mad	Daniel Mad
BW3	Barry Williams, AL, USA	MCO	Mike Chace-Ortiz, PA, USA
Dan	Daniel, Argentina	MPJ	Jim, SW England
Danix	Danix111, Poland	PPA	Peter Poelstra, Netherlands
DSch	Don Schimmel, WV, USA	Priyom	Priyom.org
EW	Eddy Waters, Australia	PUK	Peter, UK (via Enigma 2000)
F5JBR	F5JBR André, France	qsr711	QSR711
Flex	Flexoman61	RP-MD	Ron, MD, USA
GHn	Gary Hagermann, UK	Sch	Schorschi, Germany
HFD	Hans-Friedrich Dumrese, Germany	Token-J	T! via remote rx Japan
JcK	Jim	WP3	Wolfgang Palmberger
JPL	JPL, Ontario, Canada		

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215	Voice stations	S32 transcripts

Issue	Subject	Item
215	Voice stations	S4525 transcripts
215	Voice stations	S5295 transcripts
215	Voice stations	V02a oddity
215	Voice stations	V13 schedules
215	Voice stations	V22 tentative V22 digital transmissions
215	Voice stations	VC01 logs and frequencies
216	Contributors	Contributors
216	Intelligence	BND radio transmission schedule and decryp
216	Logs	Logs section
216	Military stations	M32 Russian military
216	Military stations	M32a Russian Navy
216	Military stations	M32b Russian Naval Air Transport
216	Military stations	M32c Russian Air Force
216	Military stations	RADv Russian Air Defense
216	Military stations	RAv Russian Air Force
216	Military stations	RMv Russian military
216	Military stations	RNAv Russian Naval Air Transport
216	Military stations	RNv Russian Navy
216	Military stations	Russian military CW and voice stations
216	Morse stations	M01 transcripts
216	Morse stations	M01a transcripts
216	Morse stations	M12 transcripts
216	Morse stations	M89 transcripts
216	Morse stations	MC03 transcripts
216	Morse stations	MX
216	Morse stations	UM10 transcripts
216	Picture	Former Russian/Stasi Abhörstation "Urian".
216	Utility Round-up	Unid: SH49
216	Various modes	CZE Czech diplo logs
216	Various modes	EGY Egyptian diplo logs
216	Various modes	HM01 oddity
216	Various modes	HM02 transcript
216	Various modes	M42 transcripts
216	Various modes	M42c transcripts
216	Various modes	M42d transcripts
216	Various modes	POL transcripts
216	Various modes	SDN Sudanese diplo logs
216	Various modes	X06 transcripts
216	Various modes	XPA transcripts
216	Various modes	XPA2 transcripts
216	Voice stations	E07 transcripts
216	Voice stations	E07a transcripts
216	Voice stations	E11a transcripts
216	Voice stations	S06 transcripts
216	Voice stations	S11a transcripts
216	Voice stations	S28 transcripts
216	Voice stations	S30 transcripts
216	Voice stations	S32 transcripts
216	Voice stations	S3850
216	Voice stations	S4525
216	Voice stations	S5292 transcripts

Issue	Subject	Item
216	Voice stations	V07 transcript
216	Voice stations	V13 schedules
216	Voice stations	VC01 frequencies
217	Contributors	Contributors
217	Logs	Logs section
217	Military stations	M32 Russian military
217	Military stations	M32a Russian Navy
217	Military stations	M32b Russian Naval Air Transport
217	Military stations	RADv Russian Air Defense
217	Military stations	RAv Russian Air Force
217	Military stations	RMv Russian military
217	Military stations	RNAv Russian Naval Air Transport
217	Military stations	RNv Russian Navy
217	Morse stations	M01 transcripts
217	Morse stations	M01b transcripts
217	Morse stations	M01c transcripts
217	Morse stations	M01d transcript
217	Morse stations	M03 transcripts
217	Morse stations	M08a oddities
217	Morse stations	M12 transcripts
217	Morse stations	M14 transcripts
217	Morse stations	M21 transcripts
217	Morse stations	M23 transcripts
217	Morse stations	M41 transcripts
217	Morse stations	M89 transcripts
217	Morse stations	M90 transcripts + profile
217	Morse stations	M95 transcripts
217	Morse stations	MX logs
217	Morse stations	UM10 logs
217	Picture	Stasi plate
217	Utility Round-up	ARM Armenian Air Defense
217	Utility Round-up	Unid: 524 527 NW 55
217	Utility Round-up	Unid: FSK-2, 53Bd/300Hz WX63 WX63 WX63 DE
217	Utility Round-up	Unid: UVA4 de USD4
217	Various modes	CHN Chinese military logs
217	Various modes	EGY Egyptian diplo logs
217	Various modes	HM01 oddities
217	Various modes	HM02 transcripts
217	Various modes	M42 transcripts
217	Various modes	M42b transcripts
217	Various modes	M42c transcripts
217	Various modes	M42d transcripts
217	Various modes	POL transcripts
217	Various modes	Q26 new designator. Logs + transcripts
217	Various modes	X06 transcripts
217	Various modes	XPA transcripts
217	Various modes	XPA2 transcripts
217	Voice stations	E06 transcripts
217	Voice stations	E07 transcripts
217	Voice stations	E07a transcripts
217	Voice stations	E11a transcripts

Issue	Subject	Item
217	Voice stations	E17z transcripts
217	Voice stations	G06 transcript
217	Voice stations	S06 transcript
217	Voice stations	S11a transcripts
217	Voice stations	S28 transcripts
217	Voice stations	S30 transcripts
217	Voice stations	S32 transcripts
217	Voice stations	S3850 transcripts
217	Voice stations	S4525
217	Voice stations	S5292 transcripts
217	Voice stations	V02a
217	Voice stations	V13 schedules
217	Voice stations	V21 log
217	Voice stations	V26 logs
217	Voice stations	VC01 log and frequencies
218	Appendix	Appendix 1: Russian Intelligence Digital Experiments
218	Appendix	Appendix 2: Russian Monolith stations
218	Contributors	Contributors
218	Logs	Logs
218	Military stations	M32 Russian military
218	Military stations	M32a Russian Navy
218	Military stations	M32c Russian Air Force
218	Military stations	RADv Russian Air Defense
218	Military stations	RAv Russian Air Force
218	Military stations	RMv Russian military
218	Morse stations	M01 transcripts
218	Morse stations	M01b transcripts
218	Morse stations	M01c transcripts
218	Morse stations	M03 transcript
218	Morse stations	M08a oddities
218	Morse stations	M12 transcripts
218	Morse stations	M14 transcripts
218	Morse stations	M21 transcripts
218	Morse stations	M41 transcripts
218	Morse stations	M89 transcripts
218	Morse stations	M90 transcripts
218	Morse stations	M95 transcripts
218	Morse stations	MX
218	Morse stations	UM10 transcripts
218	Picture	17-tone OFDM/MPSK spectrogram
218	Picture	X06 spectrogram
218	Utility Round-up	Cold War Spy Pocket Manual review
218	Utility Round-up	Unid 10860 kHz, morse
218	Utility Round-up	Unid 6770 kHz, morse, c/s JJ077
218	Utility Round-up	Unid net 10470 kHz, morse, c/s YRM
218	Utility Round-up	Unid station "103" 13985 kHz, voice
218	Various modes	Egyptian diplo
218	Various modes	HM01 oddities
218	Various modes	M42 new modes, logs and transcripts
218	Various modes	M42b logs and transcripts
218	Various modes	M42c logs, transcripts, format



Issue	Subject	Item
218	Various modes	M42d transcripts
218	Various modes	North Korean diplo
218	Various modes	POL transcripts
218	Various modes	Q26 logs and transcript
218	Various modes	X06 transcripts
218	Various modes	XPA transcripts
218	Various modes	XPA2 transcripts
218	Various modes	XSL logs
218	Voice stations	E06 transcripts
218	Voice stations	E07 transcripts
218	Voice stations	E07a transcripts
218	Voice stations	E11a transcripts
218	Voice stations	E17z transcripts
218	Voice stations	E25 transcript
218	Voice stations	E25a transcripts
218	Voice stations	G06 transcripts
218	Voice stations	S06 transcripts
218	Voice stations	S06c transcripts
218	Voice stations	S11a transcripts
218	Voice stations	S28 transcripts
218	Voice stations	S30 transcripts
218	Voice stations	S32 transcripts
218	Voice stations	S3850 transcripts
218	Voice stations	S5292 transcripts
218	Voice stations	V02a
218	Voice stations	V24 report
218	Voice stations	V28 new numbers station, new designator
219	Contributors	Contributors
219	Index	Index N&O 2015
219	Intelligence	Intelligence links
219	Logs	Logs
219	Military stations	M32, M32a, M32c logs and transcripts
219	Military stations	RAv, RMv, RNv, RADv logs and transcripts
219	Morse stations	M01 transcripts
219	Morse stations	M01b transcripts
219	Morse stations	M12 transcripts
219	Morse stations	M14 transcripts
219	Morse stations	M21 transcripts
219	Morse stations	M24 transcripts
219	Morse stations	M41 transcripts
219	Morse stations	M89 transcripts
219	Morse stations	M95 transcripts
219	Morse stations	MX
219	Morse stations	UM10 logs
219	Morse stations	UM2 new designator, YRM-net, transcripts
219	Utility Round-up	Unid (possible M14/M24 training) on 10755 kHz
219	Utility Round-up	Unid CO7G on 4852 kHz
219	Utility Round-up	Unid RDI on 4850 kHz
219	Utility Round-up	Unid Russian station
219	Utility Round-up	Unid station JJ077 solved
219	Various modes	Egyptian diplo

Issue	Subject	Item
219	Various modes	HM01 test transmission
219	Various modes	M42 logs, transcripts
219	Various modes	M42b logs, transcripts
219	Various modes	M42c logs, transcripts
219	Various modes	M42d logs, transcripts
219	Various modes	North Korean diplo, logs
219	Various modes	Pakistani Intelligence, log
219	Various modes	POL logs, transcripts
219	Various modes	Q26 logs, transcript
219	Various modes	Sudanese diplo, logs
219	Various modes	X06 logs, transcripts
219	Various modes	XPA logs, transcripts
219	Various modes	XPA2 logs, transcripts
219	Voice stations	E06 transcripts
219	Voice stations	E07 transcripts
219	Voice stations	E07a transcripts
219	Voice stations	E11a transcripts
219	Voice stations	E17z transcripts
219	Voice stations	E22 transcripts
219	Voice stations	E25 / E25a transcripts
219	Voice stations	G06 transcripts
219	Voice stations	S06 transcripts
219	Voice stations	S11a transcripts
219	Voice stations	S28 transcripts
219	Voice stations	S30 transcripts
219	Voice stations	S32 transcripts
219	Voice stations	S3850 transcripts
219	Voice stations	S5292 transcripts
219	Voice stations	V02a transcript
219	Voice stations	V07 transcript
219	Voice stations	V28 new Korean station, description, transcripts, logs

All information in this newsletter was submitted by independent radio monitors or has been obtained from public available sources and public sites on the web. Wherever data was obtained via the web or elsewhere, references and/or links to these sources have been noted.

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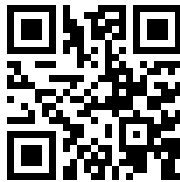
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878 27364 92836 89428 61288 14982 34498 32164 31276 81  
986 48932 70987 32123 49817 26346 81287 65491 87364 81  
721 75654 55656 12737 72727 72727 91918 63473 67867 76  
423 87629 37677 32612 53498 71296 28756 18276 98716 87  
7269 76329 74698 76857 98670 27601 56701 57601 73648 1  
591 87364 87265 96710 27630 12673 84769 28743 98127 5  
63298 75698 27465 87326 49876 28376 81273 98615 81  
67 87432 74328 78674 29867 32867 67867 86786 43266 43  
67 68768 68763 34234 34238 68768 62342 48273 48768 23  
936 98432 32432 86743 43286 43286 43286 43286 43286 43  
743 86743 86743 39867 32867 86743 43286 43286 43243 86  
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